

May, 1958

SOAP and CHEMICAL SPECIALTIES

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George E. Flemming, just elected head
of newly formed Canadian Chemical
Specialties Manufacturers is president
of Natural Products Corp., Quebec,
which he founded in 1945. During forma-
tive stages of the new Canadian spe-
cialties trade association he served as
chairman of organizing committee.





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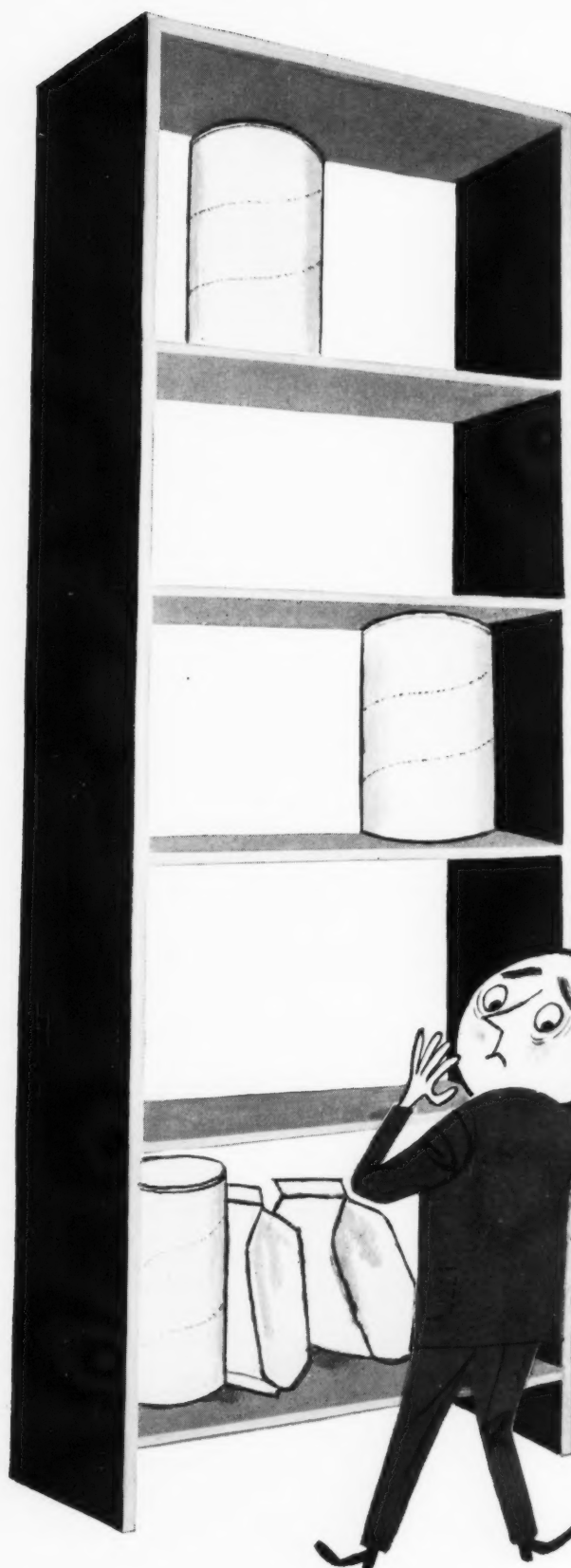
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MAY, 1958



Is hand-to-mouth phosphate buying increasing your costs?

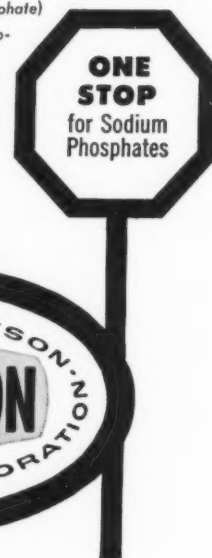
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SOAP and CHEMICAL SPECIALTIES

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MEMBER



since 1934

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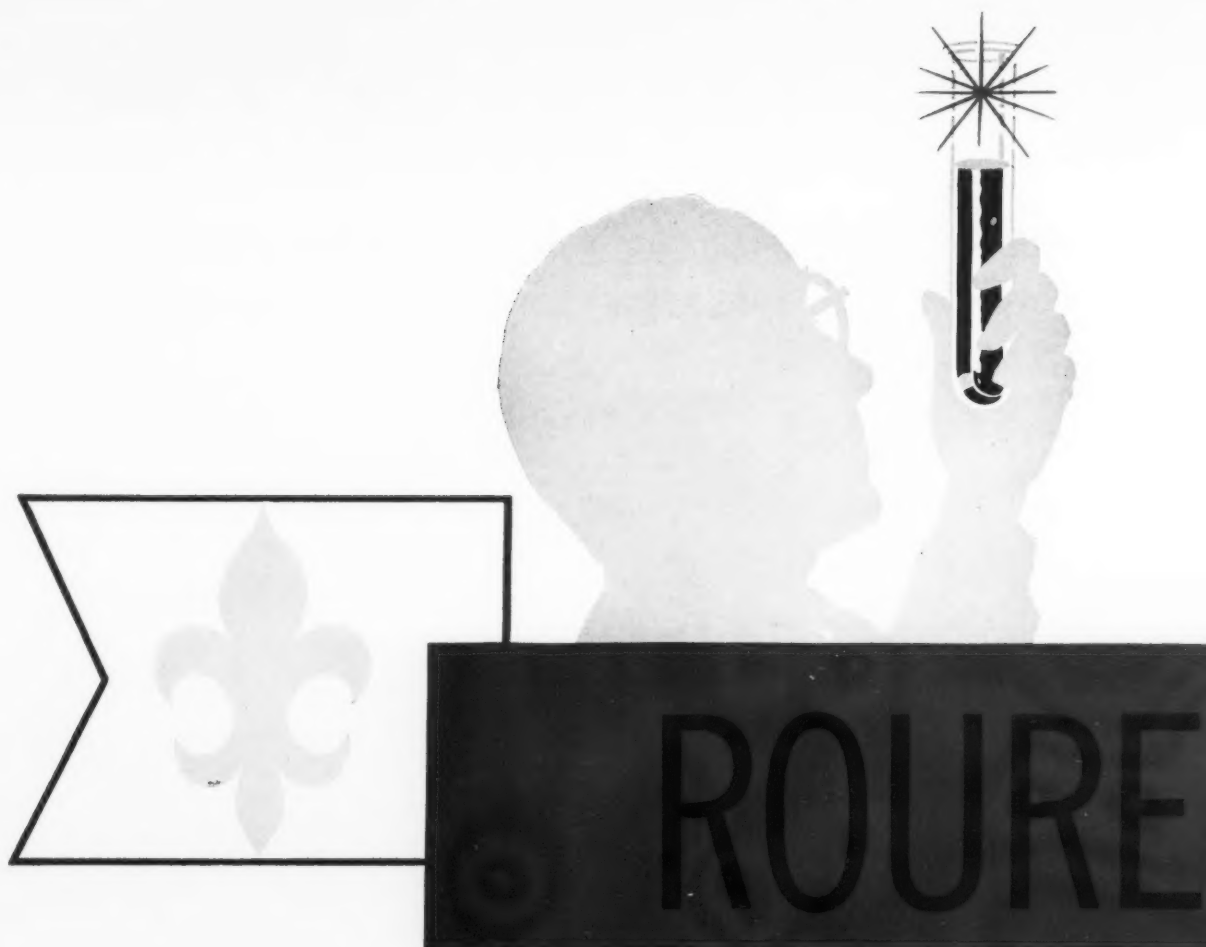
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SOAP and CHEMICAL SPECIALTIES

onyx offers: new handbook of surface-active agents



Onyx takes great pleasure in announcing the publication of its new handbook of surface-active agents. Designed for easy reference, the handbook groups 90 different Onyx surfactants in three major categories:

(1) Anionics, (2) Cationics, and (3) Non-ionics.

Product descriptive data — including specific applications and properties are tabulated in a standard format throughout the booklet. A general explanation of what surface-active agents are and what they do is contained in the foreword.

HOW TO GET IT — merely request the new Onyx handbook on your company letterhead and indicate your particular interest in surfactants. No charge or obligation of course. For prompt action write to **HANDBOOK, ONYX OIL & CHEMICAL COMPANY**, 190 Warren Street, Jersey City 2, N. J.





For private brand resale
buyers of waxes
and kindred products

...Your Quality Guide

Beauty and Durability

Initial appearance is important, but for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffic, but even more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

Anti-Slip

Anti-slip, or reasonable safety underfoot, does not mean that the qualities of beauty and protection need be sacrificed. The proper balance—a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily—gives the performance that answers the foremost original reason for use of a floor wax...beauty and protection.

Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Over-doing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as water-resistance under most normal conditions.

WATER EMULSION WAXES

Each of Candy's floor waxes are all-around top quality for certain traffic conditions. They impart the finest protection and beauty to floors for which best suited.

CANDY'S SUPREME (standard)
BRIGHT BEAUTY®
CANDY'S SUPREME Special WR
SUPER CANDI-WAX®
CANDI-WAX® #CS
CANDI-WAX #6000

All Candy's products are available for private brand resale and are sold only through distributors except for experimental accounts in Chicago essential to research.

Solid Content

The percentage of solid content is not nearly as important as the quality of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Over-waxing and resultant greater difficulty in removal for periodic maintenance may do more harm than good.

Carnauba Wax

The most important features of a good wax...all-around quality of performance...are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba alone imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given wax feature should be avoided and proper care taken to provide for most satisfactory performance.

Other HIGHEST QUALITY products of CANDY & COMPANY, Inc.

CANDI-COAT 1000, WATER RESIN EMULSION

As a floor coating for use under specific conditions of continued maintenance on certain types of floors this water resin emulsion has none of the faults associated with coatings of this type. It is the finest product in its class produced up to this time.

Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER
For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface cleaner. Pleasant odor, crystal clear color and thorough cleaning action with all types of equipment. Unaffected by hard freezing. Furnished ready for resale or in concentrated form for local packaging...nothing but water to buy or mix in.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort to a deep impressive lustre. Permits repeated repolishing with a dry cloth, thus saving many re-applications. A very economical polish of the very highest quality.

Bright Beauty PASTE WAX

Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, having "creamy" consistency and stability that lasts throughout storage and usage life.

Bright Beauty LIQUID (spirit) PREPARED WAXES

A complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each acts as a "dry

cleaner" to keep surfaces waxed protected with a superb coating necessary for many applications such as wood and certain other types of floors; for bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH
As a glass cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanliness to glass. As a cleaner of silver, it polishes to a high lustre without abrasion and can even correct the abuses of scratchy "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX

Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove...free from dusty effects. Its protective quality adds more "floor-years" to expensive ballroom floors.

Bright Beauty Heavy Duty PASTE CLEANER

Cleans and scours more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign matter.

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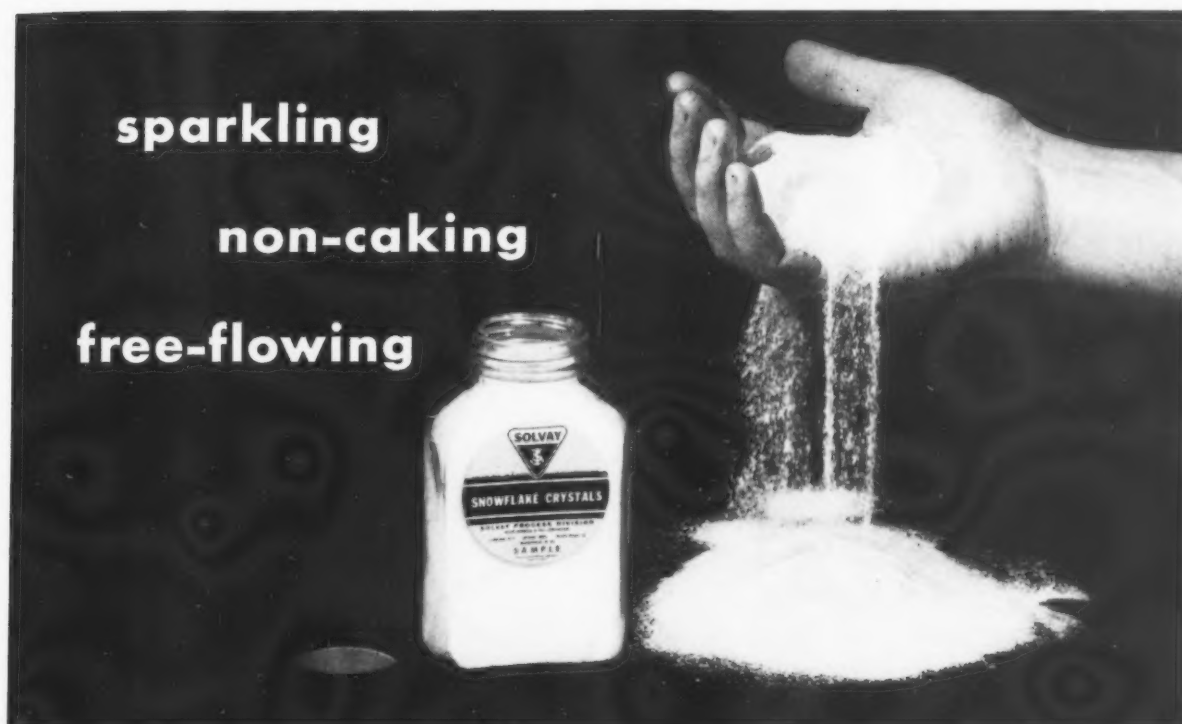
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sparkling
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Chlorine • Soda Ash • Methyl Chloride
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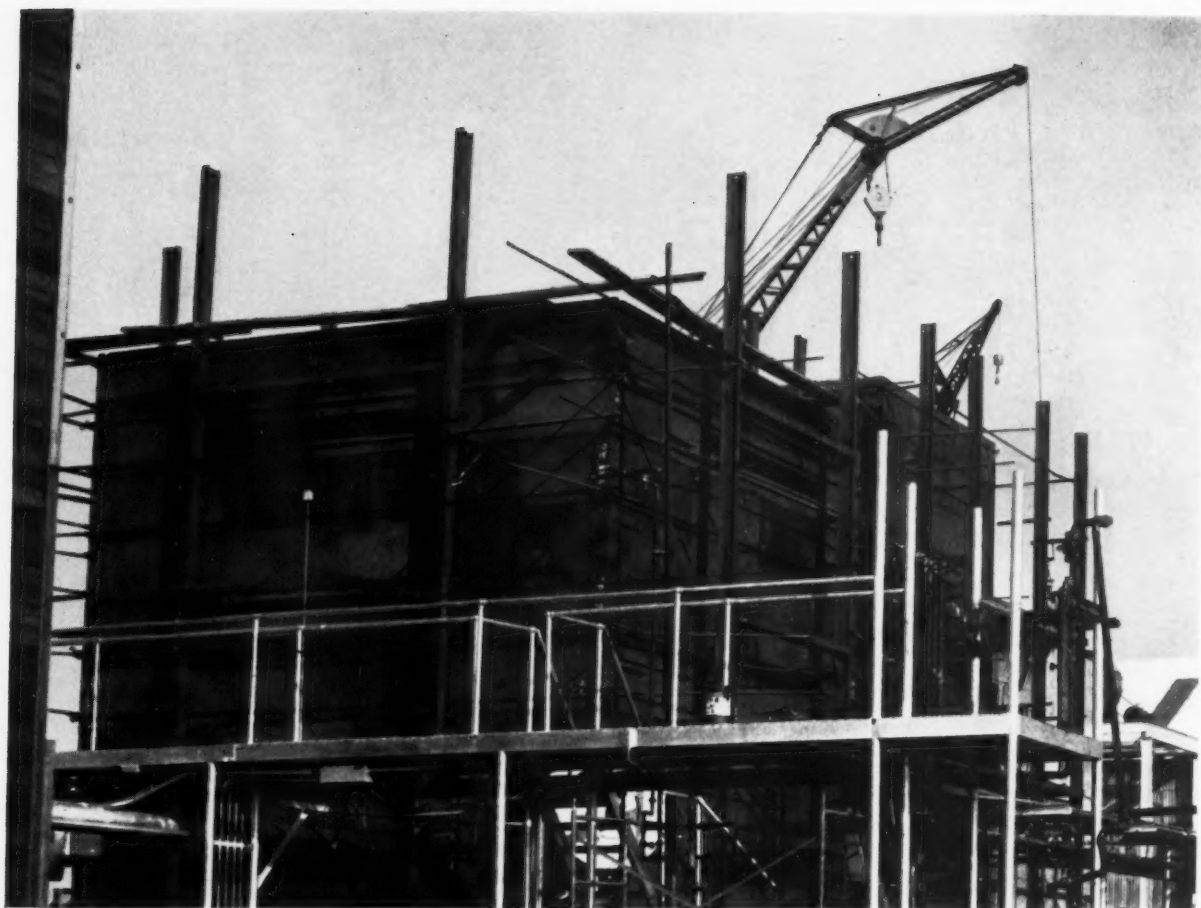
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key word at Shea: **GROWTH**

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GROWTH THROUGH EXPANSION. During the past four years, Shea has constructed three modern sodium phosphate plants. The one shown being built, above, is already in operation, producing 75,000 tons of phosphates a year. All Shea plants need only minor modifications for increased production in the future. As a result, an unfailing supply of phosphates is assured. Shea now ships phosphates from Adams, Massachusetts, Jeffersonville, Indiana, and Dallas Texas. A steadily growing stream of phosphorus is provided by the plant at Columbia, Tennessee.

GROWTH THROUGH RESEARCH. The list of phos-

phate products made by Shea has grown rapidly in eight years. Shea was the first to develop spray-dried sodium phosphates to be sold to the soap industry. Now, Shea is embarking on plans for further diversification. Two laboratories—at Adams, Mass. and Jeffersonville, Indiana—are busily engaged in research on an entirely new range of phosphate chemicals. Included are the increasingly important organo-phosphates.

GROWTH THROUGH SERVICE. Because Shea offers phosphates of consistent high quality, reliable service and dependable delivery, more and more users of phosphates are turning to Shea.



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SOAP and CHEMICAL SPECIALTIES



Memo to our Readers:*

Subject: INDIVIDUAL PRODUCT DEVELOPMENT

We, at Dragoco, are dedicated to the creation of fragrances and flavors to help our friends sell their own products with greater effectiveness. We have originated and collaborated in the development of many fine combinations that have enjoyed consumer acceptance throughout the world.

We take pride in the fact that Dragoco produces only the finest materials and specializes in original research and new ideas. To ensure the perfection of end results we have developed the most rigid control methods for screening our raw materials. Our synthetic bases are a specialty that has earned for Dragoco a reputation for quality in more than 90 countries.

Whatever your problem may be, we want to emphasize our entire willingness and desire to collaborate. We are always most happy to assist you in the development of your own ideas. These may be based upon large or small changes in samples we have submitted to you; they may involve step-by-step building up of a new or special fragrance. We have the patience to work with you until you get exactly what you want. More than that, Dragoco research will bring you current knowledge combined with the most modern research techniques headed by leading authorities in the field. This will assure the suitability of the final formula for use in perfumes, colognes, aerosols, shampoos, make-up or treatment preparations.

And the formula will be held for your own exclusive use.

We assure our clients of a completely confidential relationship.

Henry G. Gribou
Vice President

* Reprinted from February 1958 Dragoco Report

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J

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J-400

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Poly-Tergent J surfactants (J-200, J-300, J-400, J-500) are nonionics of ascending molecular weights. Each has its individual characteristics, and all are available in 5- and 55-gallon drums, tank trucks and tank cars.

We will be glad to send technical data and a sample of the "J" which might best fit your process. Please write on company letterhead.

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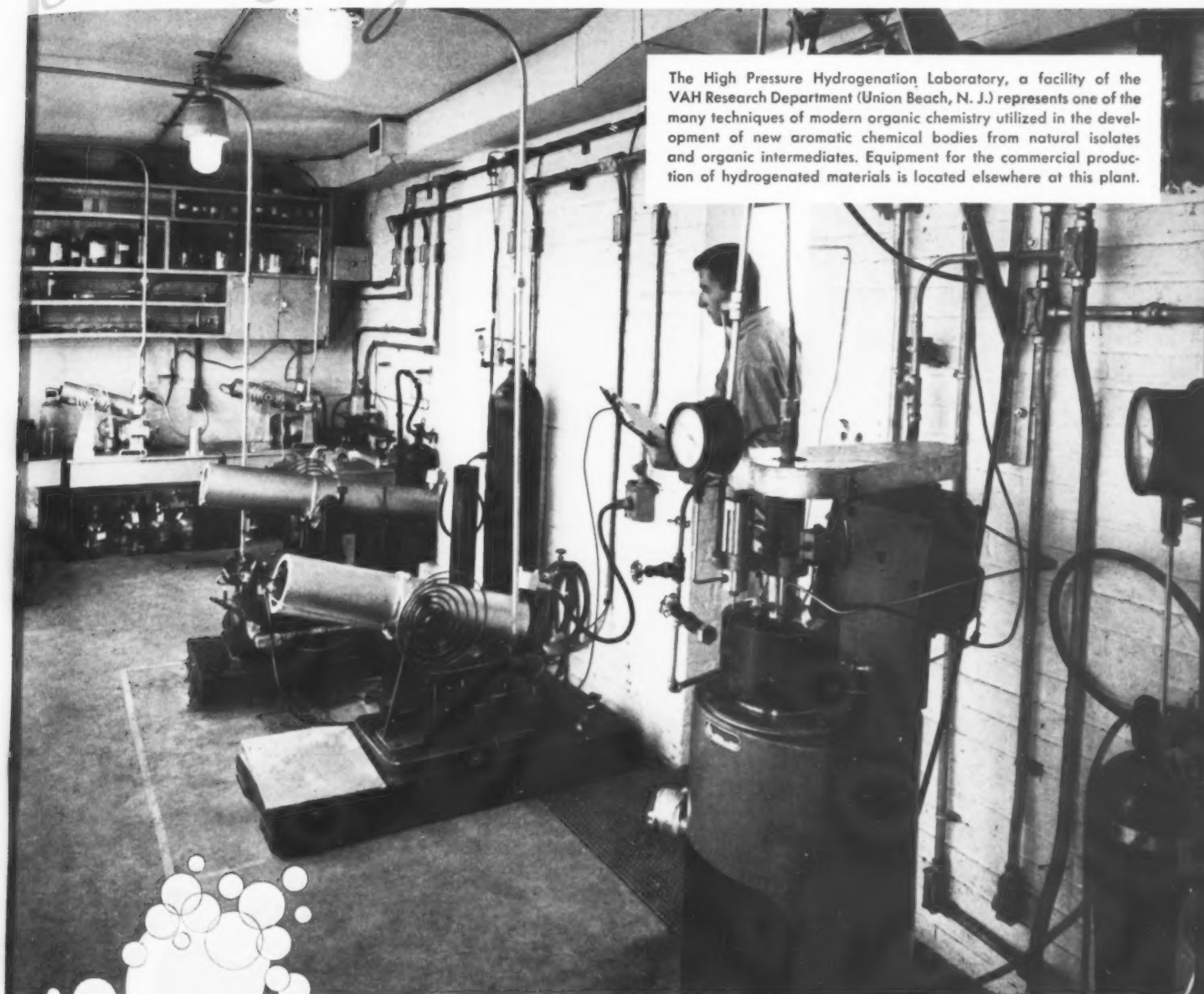
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Finer Fragrance

SELLS MORE SOAP

The High Pressure Hydrogenation Laboratory, a facility of the VAH Research Department (Union Beach, N. J.) represents one of the many techniques of modern organic chemistry utilized in the development of new aromatic chemical bodies from natural isolates and organic intermediates. Equipment for the commercial production of hydrogenated materials is located elsewhere at this plant.



A well balanced and appealing fragrance in a soap will directly result in firmer brand loyalty and dependable repeat sales. The modern equipment and up-to-date techniques of the VAH aromatics research activities plus the commercial availability of these new materials enable our staff of able creative soap perfumers to serve your fragrance needs better and more economically.

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Oronite has **THE** surfactant to fill your individual needs

want detergency?

Whether you require exceptional detergency properties in the basic raw material or from a surfactant in intermediate form or in a finished product—it will pay you to consult Oronite—the world's largest producer of synthetic detergent raw materials. Our extensive technical experience is at your disposal.

want **HIGH** suds or **LOW** suds?

Oronite's D-40 finished dry detergent in flake, granule or powder form has excellent foaming power in hard or soft water. D-60 offers you a higher active product. Nonionic Dispersant NI-W is a water soluble, low sudsing product desirable where "foam" is a handicap.

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D-40, D-60 in dry form, Wetting Agent "S" in paste form and NI-W in liquid form have superior wetting ability. Compare these products with those you are now using—samples are available. Or, tell us your particular needs for "wetting" and we can provide suggested formulations.

want *emulsifying* or dispersing action?

D-40 and D-60 have the ability to emulsify and suspend animal, vegetable, and mineral fats, oils and greases. Oronite's water soluble Dispersant NI-W is completely compatible with soaps, anionic detergents and cationic germicides. Its companion product Dispersant NI-O is an outstanding emulsifier for water-in-oil emulsions.



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After Closing

Samuels Leaves Babbitt

A. O. Samuels has resigned as a member of the executive committee and the board of directors



A. O. Samuels

of B. T. Babbitt, Inc., New York, and as president of Connecticut Chemical Research Corp., Bridgeport, Conn., aerosol manufacturers, and its subsidiaries, Bostwick Laboratories, Bridgeport, and U. S. Packaging Corp., Paterson, N. J.; it was announced early this month by Marshall S. Lachner, president of Babbitt. Mr. Samuels founded Connecticut Chemical in 1947. The firm merged with Babbitt in September, 1956.

According to the announcement, Mr. Samuels' resignation is

Jack Schenberg



part of an overall plan for reducing his own responsibilities, outlined by himself at the time of the merger. During the past year, he has been actively engaged in helping reorganize the parent company. He will remain in a consulting capacity to Mr. Lachner for an indefinite period. Sales management of Babbitt's aerosol division has been turned over to Jack Schenberg, who has been associated with the division since its inception.

Mr. Samuels plans to devote his future to management consulting and business reorganization in the aerosol field and other industries. He is opening a temporary office in his home at Old Battery Rd., Bridgeport, before opening a New York office in the near future.

Among his contributions to the aerosol field are the introduction of low pressure aerosols, the development and design of specialized valves, developments in coated glass bottles for aerosol use, and the initiation of "Polysols" as a propellant. For the past five years, he has been closely associated with Lawrence Ward, Portland, Pa., in the development of metered aerosol valves.

★

West Moves Branch Office

West Chemical Products, Inc., Long Island City, N. Y., has moved its manufacturing plant and district headquarters from Birmingham, Ala., to Atlanta, Ga., according to C. L. Powell, district manager. The firm had occupied a new one-story brick building at 1248 Zonolite Rd., NE.

—★—

Wrisley Earnings Lower

Allen B. Wrisley Co., Chicago, recently reported a decline in sales and earnings during 1957. Net sales totaled \$6,409,826, compared with \$6,690,276 in 1956. A net loss

of \$65,335 was reported by the company in 1957. The previous year's net income totaled \$187,993, equal to share earnings of 63 cents.

—★—

Armour Merges Dept.'s

The consolidation of the fatty acids and industrial oils departments of its chemical division, under Paul L. Sheppard, sales manager, was announced late in April



Paul L. Sheppard

by Armour and Co., Chicago. In making the announcement, R. W. Graham, director of sales, revealed that Werner L. Riegler has been appointed product manager of both lines. T. F. Yuschik succeeds Mr. Sheppard as central regional sales manager with headquarters in Chicago.

Mr. Sheppard started with Armour in 1929 as a chemist. He has subsequently served in sales, market research and technical service prior to becoming central regional manager in 1952.

Werner L. Riegler





T. F. Yuschik

Mr. Riegler, previously product manager of fatty acids, joined Armour in 1951 as a chemical engineer. Mr. Yuschik, who was product manager of industrial oils, joined Armour as a chemical division salesman in 1947.

— ★ —

Robinson Wagner Moves

Robinson Wagner Co., manufacturers of lanolin and lanolin derivatives, moved its general and executive offices to a new building in Mamaroneck, N. Y., Apr. 26. Located on 628 Waverly Ave., the new building is fully air-conditioned and provides nearly three times as much space as the company formerly occupied at 110 E. 42nd St., New York City. The new telephone number is Owens 8-8550.

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New Nopco Brochure

A new brochure describing its recently-developed "Hyonic LA" series of alkylolamides for use in detergents was issued last month by the specialties division of Nopco Chemical Co., Harrison, N. J. The newly-developed series features six chemicals, has an amide content near 100 per cent, and makes complete Nopco's line of "High-Purity" alkylolamides, according to the manufacturer. Combined with other surfactants, these alkylolamides may be used to formulate dishwashing compounds, shampoos, bubble bath and cleaning compounds and rug shampoos. Copies may be obtained from the company.

ACS 133rd National Meeting Highlights

A NEW potential source of non-ionic detergents and a novel synthesis of high gamma BHC, as well as a number of other developments pertaining to the chemical specialties field were among the highlights of the vast program presented at the 133rd national meeting of the American Chemical Society, held April 13-18 in San Francisco.

An ethylene oxide adduct derived from higher ether alcohols obtained as by-products of the oxo process was described in a paper by J. H. Bartlett, I. Kirshenbaum, and C. W. Muessig, Esso Research and Engineering Co., Linden, N. J. The paper was read in the Division of Petroleum Chemistry by Dr. Kirshenbaum. The adduct without builders was submitted to screening tests. It was found to exhibit detergency comparable to nonyl phenol derived ethylene oxide condensation products. The oxo process is a method for the production of alcohols, aldehydes and other oxygenated compounds. It involves the passage of olefin hydrocarbon vapors over cobalt catalysts in the presence of carbon monoxide and hydrogen gases.

"Direct Synthesis of High Gamma Content Benzene Hexachloride," by William E. Bissinger, Frederick C. Dehn, Andrew J. Kaman, and Frederick E. Kung of Columbia-Southern Chemical Corp., Barberton, O. was presented before the Division of Industrial and Engineering Chemistry. The usual percentage of gamma isomer in technical BHC amounts to 14 to 16 per cent. The method revealed at the ACS meeting obtains directly an adduct containing as much as 30.5 per cent gamma isomer. Benzene was additively chlorinated while controlling the variables of temperature, solvents, and chlorine concentration. The highest gamma yield was achieved by conducting the chlorination in acetic anhydride solution at -40° C. with an average chlorine concentration during

the reaction of 0.04 per cent. Special chlorination and irradiation apparatus was designed for the study.

In the Division of Agricultural and Food Chemistry the "Permanent Mothproofing of Wool with Dieldrin" was described in a paper by L. E. Mitchell and A. Williams, Agricultural Chemical Sales Division of Shell Chemical Corp., New York. Dieldrin effectively controls clothes moths and carpet beetles. When applied to wool in a hot acid bath, for example, in a commercial die bath, dieldrin becomes permanently fixed in the wool fabric. Analyses showed the compound to be evenly distributed in the wool at the desired level. Repeated washings and cleanings did not substantially reduce the dieldrin content. Thus the ASTM tests for permanent mothproofing are satisfied.

In the same division S. S. Block, University of Florida, Gainesville, discussed "Fungicide Testing Methods and Their Meaning." Laboratory methods frequently fail in the evaluation of microbicidal activity and in the prediction of field performance of pesticides. Examples of failures are given and reasons studied. By a judicious selection of methods and their careful interpretation considerable expenses in field testing of unwarranted products may be eliminated, according to Dr. Block. He cited examples of methods for evaluating fungicides and discussed the interpretation of test results with copper, sulfur, dithiocarbamates, organic mercurials, sorbic acid, copper-8-quinolinolate, captan, dichlorophene, and other important commercial fungicides.

Discovery of a new class of organophosphorus compounds exhibiting miticidal and insecticidal activity was reported by Martin J. Diamond, California Spray-Chemical Corp., Richmond, Calif. His paper was entitled "Iminyl Phosphates, a New Class of Pesticides." "New Organophosphorus Deriva-

tives of p-Thioxane and 2,6-Dimethyl-p-Thioxane with Insecticidal and Acaricidal Activity" was the title of a paper by A. H. Haubein, Research Center, Hercules Powder Co., Wilmington, Del. "Insecticidal Chlorinated Dimethanophthalazines" were described by J. G. Kuderna, J. W. Sims, J. F. Wikstrom, S. B. Soloway, Agricultural Research Division, Shell Development Co., Modesto, Calif. Read by Mr. Kuderna, the paper deals with hexachlorodimethanophthalazine which is a nitrogen analog of the insecticide aldrin. Several derivatives are described which are highly toxic to insects.

"Determination of Chlordane in the Air of Homes Treated for Termite Control" was described by Marshall A. Walina, Joanne M. Kearney, and Percy B. Polen, Velsicol Chemical Corp., Chicago. A method for detection and analysis of micro quantities of chlordane vapor in air was developed. Sampling and measuring methods are presented.

The Division of Industrial and Engineering Chemistry featured a session on process planning, of interest to anyone concerned with development and/or production. A session dealing with computers in the chemical world included papers on the application of these electronic aids to process control.

New "Vel" Agency

Colgate-Palmolive Co., New York, recently announced the appointment of Norman Craig & Kummel, New York, as advertising agency for its "Vel" powder form detergent. Colgate spends approximately \$1,800,000 a year in advertising "Vel." The "Vel" account was handled by Lennen & Newell, Inc., New York, until late in February, when Colgate revealed that it was seeking a new agency for the product. At that time, the company said that the move was made because it did not want to have "Vel" liquid and powder handled by the same agency because they are competitive products.

New Pyrethrum Boards Rep.

The pyrethrum growers of Africa recently announced the appointment of a new sales agent and establishment of a broadened research program in Africa and Europe, according to an announcement by H. Alvin Smith, New York, U.S. representative for the African pyrethrum growers. Biddle Sawyer & Co., Ltd., London, was named as distributors in the United Kingdom and Ireland for the Pyrethrum Boards of Kenya and Tanganyika and Societe Cooperative de Produits Agricoles of the Belgian Congo — the three principal cultivation areas for pyrethrum.

At the same time, announcement was made of establishment in England of new European technical headquarters, which will operate under the name of African Pyrethrum Technical Information Centre, Ltd. Dr. T. F. West, formerly director of Drug Houses of Australia, Ltd., will serve as European operations executive.

In Kenya, where there already is in operation the only laboratory devoted exclusively to technical research into pyrethrum, Dr. Alan Goldberg has been named

director of services. Dr. Goldberg is internationally known for his research work in the fields of chemotherapy and toxicology.

An additional appointment is that of J. Huntley, an engineer of Hull, England, as manager of a new plant under construction at Nakuru, Kenya, for the extraction of pyrethrins, the active agent in the pyrethrum flower. Nakuru also is headquarters of the Pyrethrum Board of Kenya and the site of the African laboratory.

★

V-C Men to Form Own Firm

J. B. Moore, III, and John G. Asher, manager and sales manager, respectively, of the chemicals division of Virginia-Carolina Chemical Corp., Richmond, resigned effective April 30. They plan to form their own chemical brokerage and distribution firm. No name has been announced as yet for the firm, which will be located in Richmond.

Mr. Moore, who is 49, joined Virginia-Carolina in 1948 as sales manager of the chemicals division. Two years later he was appointed manager of the division.

A veteran of 34 years with

Edward J. Breck, president of John H. Breck, Inc., Springfield, Mass., receives Harry Brown Outstanding Citizen of 1957 Award of Jewish War Veterans Post 26, Springfield, at a dinner held in his honor recently. Shown in photo (left to right) are: Arthur B. Langlie, president of McCall Corp., who was principal speaker at the dinner; Mr. Breck; Lloyd M. Raine, gen. chairman of JWV; and Harold Hambro, Springfield post commander.



V-C, Mr. Asher joined the company in 1924 as assistant chemist. Later he became chemist, industrial chemical salesman and assistant sales manager of the chemicals division. He was named sales manager of the division in 1950.

—★—

Continues in Pyrethrum

Greene Trading Co., 60 Wall St., New York, formerly sub-agents for various pyrethrum interests in Africa, will continue to act as sub-agents in the United States for the sale of pyrethrum extract originating in Kenya's "only processing plant," it was announced April 11. The East African Extract Corp., Nairobi, the company owning the plant, has an annual allocation of flowers from the Pyrethrum Board of Kenya and the plant has been producing pyrethrum extract for the world markets for the past 11 years. Greene Trading Co. continues under the management of George E. Nixon, who made the announcement.

In March the Pyrethrum Board of Kenya, as spokesman for Kenya Colony growers, as well as the Pyrethrum Board of Tanganyika and the Societe Cooperative des Produits Agricoles of the Belgian Congo, announced termination of a long standing agreement whereby Mitchell Cotts & Co., London, acted as a pyrethrum sales agent. As a result of this action Greene Trading Co., a wholly owned subsidiary of Cotts ceased to be sales agent in the U. S. At the same time the Board announced the appointment of H. Alvin Smith, former president of John Powell & Co., New York, as special representative in America.

—★—

Pyrrole Names Arbaugh

Howard L. Arbaugh has been named vice-president of Pyrrole Chemical Co., Portsmouth, O., it was announced recently. Mr. Arbaugh also serves as acting manager of the concern which produces detergents and industrial chemicals. He formerly served as sales manager.

Watkins Heads Merchants

Election of James K. Watkins, Jr., as president of Merchants Chemical Co., New York, was an-



James K. Watkins, Jr.

nounced recently. He succeeds Lemuel Skidmore who becomes chairman of the board. The company is a distributor of acids, alkalis, surfactants, emulsifiers, chlorinated solvents and finished products, including soaps and related chemical specialties. Mr. Watkins joined Merchants in 1947, became treasurer the following year, and vice-president in 1951.

—★—

Zeitlin to Emulsol

Jack Zeitlin has joined Emulsol Chemical Corp., Chicago, a division of Witco Chemical Co., New York, as technical sales representative, it was announced recently. His territory includes the east coast from New York southward. Mr.

Jack Zeitlin



Zeitlin formerly was associated for 10 years with the chemical laboratories of General Dyestuff Corp., New York.

—★—

John R. Gilman Dies

John R. Gilman, 63, former advertising executive with Colgate-Palmolive Co., and Lever Brothers Co., both of New York, died Apr. 30 at his home in Tiverton, R. I., after a brief illness. For the past four years Mr. Gilman had been retired. His last active post was that of vice-president of Roy S. Durstine advertising agency in New York.

A graduate of Harvard University, Mr. Gilman joined Lever in 1917. After serving as assistant advertising manager, he was named associate advertising manager. When he left Lever after more than 30 years of service he was vice-president of advertising and a director. In 1949, Mr. Gilman was named vice-president in charge of advertising for Colgate-Palmolive Co. He left that post in 1952 to join the Durstine agency.

Mr. Gilman was an originator of the "Lux Radio Theatre," during the 1930's. He also was a trustee of the Newton (Mass.) College of the Sacred Heart.

Surviving are his widow, the former Philomene F. Gradie; a son, John R. Jr., presently head of research for John H. Breck, Inc., Springfield, Mass., and three daughters.

—★—

Brandt Guest Speaker

Hugh B. Brandt, associate director of the industrial engineering division of Procter & Gamble Co., Cincinnati, was one of the principal speakers at the 13th annual Management Engineering Conference held at the Hotel Statler, New York, Apr. 24-25. Mr. Brandt, whose topic was "Multiple Factor Incentives," addressed the group on Apr. 25. The conference is sponsored by the Society for Advancement of Management and the Management Division of the American Society of Mechanical Engineers.

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well, you might do it this way . . .

Some manufacturers will go to any lengths to make their products more appealing, more acceptable for today's odor-conscious market. However, the transformation of a product, handicapped by "chemical halitosis" is safest in the hands of experienced specialists.

Felton's chemists answer the problem of neutralizing or completely reodorizing

your product with resourceful imagination, individual attention and skill.

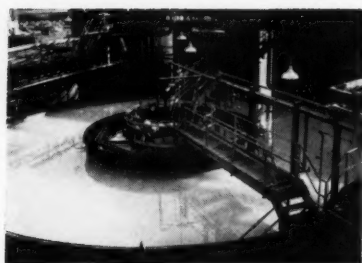
They have played this part in the development of aromatics and deodorizing agents for industrial products as widely varied as . . . soaps, detergents, paints, insecticides, solvents, formaldehyde preparations, space deodorants, disinfectants, drip and cleaning fluids, latex, textiles and many others.

Send us your product sample for free analysis and odor recommendations.

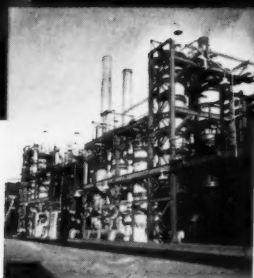
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in the U.S.A.!*



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Liquid 50%, Regular
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Flake, Solid and Ground, 76% Na_2O

CAUSTIC POTASH

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Perhaps you never thought of it this way: a chlor-alkali plant is as new as its cell room and "salt farm". That's why we say the Westvaco plant is among the "newest" in the industry!

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Why not let us prove it?

Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION

Westvaco Chlor-Alkali Division

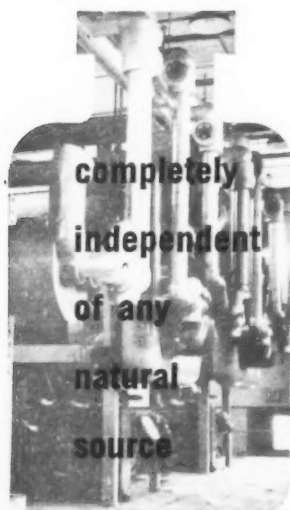


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Pure nerolidol. Light balsamic odor. Excellent fixative. Blends well with any perfume compound.

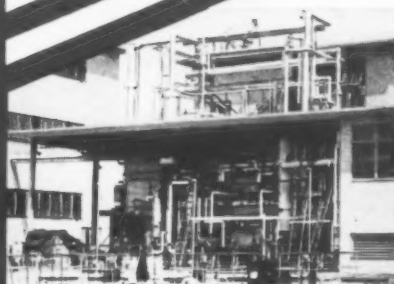
Detailed information on each product will be furnished on request.



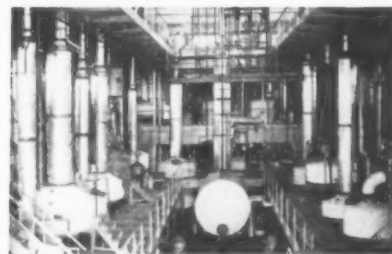
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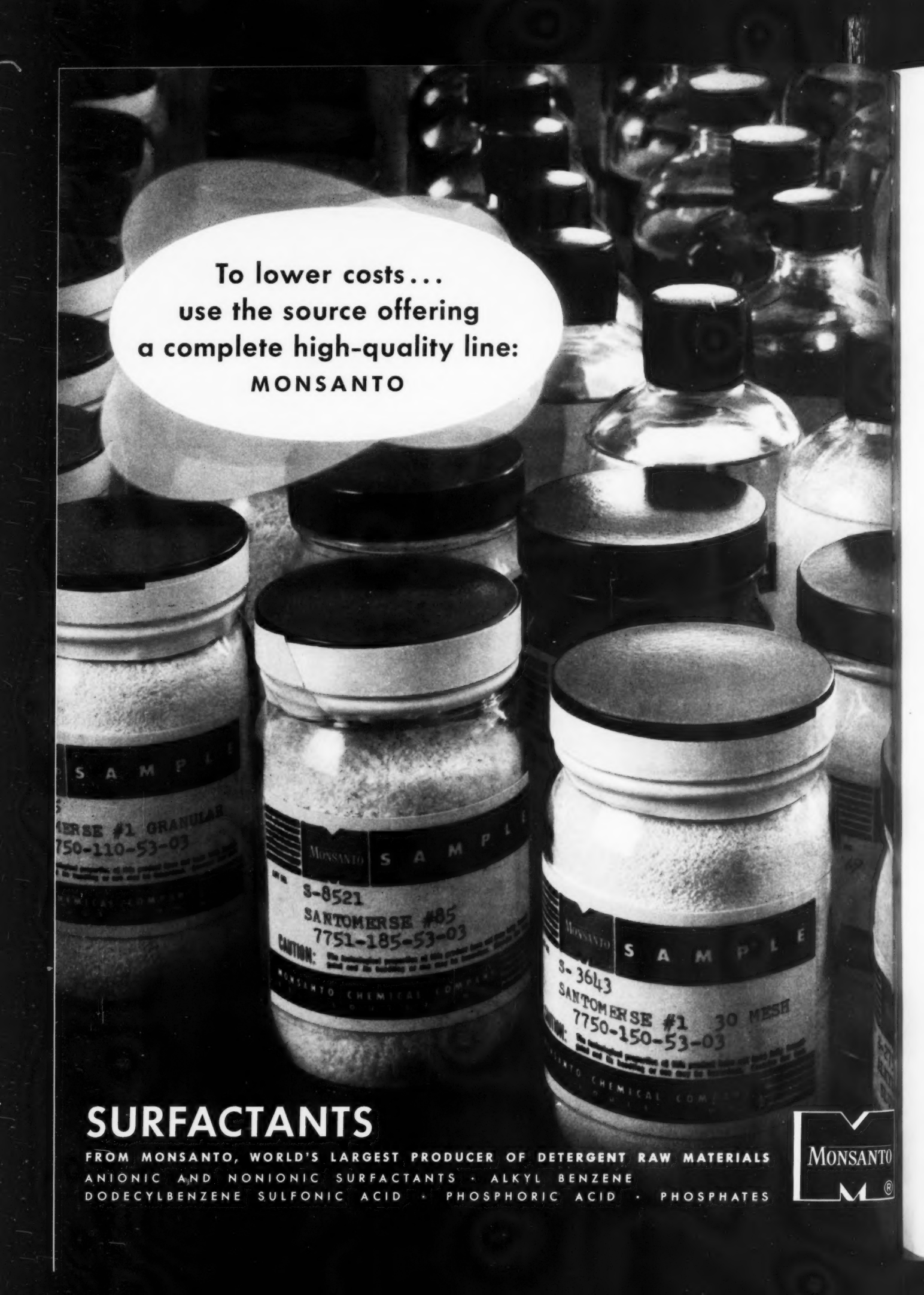


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Top quality soaps start with the best vegetable fatty acids. That's why ADM fatty acids are the first choice of premium soap manufacturers.

You can choose from nine specialized ADM corn, soya, cottonseed, or linseed fatty acids. A glance at the specifications shows that this complete line gives you a wide selection, whether you are looking for economy, easier processing, or higher quality.

That's one of several big advantages you gain in doing business with ADM—you have a single reli-

able source for a complete line of dependably uniform fatty acids. Highest purity and unvarying specifications are always assured.

In addition to the time-saving convenience which comes with buying from ADM, you also have the advantage of being able to buy any combination of fatty acids and linseed and soybean oils in truckload, carload, or tankcar shipments. These combined purchases add up to healthy savings.

A COMPLETE LINE FOR YOUR NEEDS

Many soap and chemical specialties manufacturers find other ADM chemical products profitable and useful. ADM sells lauryl, myristyl, cetyl, stearyl and oleyl alcohols, hydrogenated fatty acids and hydrogenated glycerides as well as vegetable fatty acids. If you manufacture soaps, surfactants or cosmetics, ADM's complete line of Hydrofol Products should be on your approved list.

Linseed, Soybean and Marine Oils, Synthetic and Natural Resins, Fatty Acids and Alcohols, Vinyl Plasticizers, Hydrogenated Glycerides, Sperm Oil, Foundry Binders, Bentonite, Industrial Cereal, Vegetable Proteins, Wheat Flour, Dehydrated Alfalfa, Livestock and Poultry Feeds.

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	Regular Distilled	157 Min.	18-24	6 Max.	195-204
	SM-500	152 Min.	18-24	10 Max.	193-204
SOYA	Water White Distilled	135 Min.	20-23	2 Max.	195-205
	RO-10	124 Min.	23-29	5-6	195-205
	RO-11-S	124 Min.	23-29	4 Max.	195-205
SOYA-TYPE	RO-8	115 Min.	30 Max.	6-8	195-205
COTTONSEED	Double Distilled	95-110	32-38	8 Max.	195-205
CORN	Double Distilled	105-120	26-32	8 Max.	195-205

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...WORKS IN ANY KIND OF WEATHER

Remember last summer — recall processing problems? Forget them! For good! Pilot HD-90 is the reliable, all-weather alkyl aryl sulfonate that keeps production rolling along in high gear — even on the hottest, sticky, humid days. It is easier to measure and to pour, with fewer clean-outs. HD-90 is all-weather protection for your products, too.

Pilot HD-90 offers more detergent suds than any other material at a competitive price. That's because it's hard working — 90% minimum active drum-dried flake.

Pilot HD-90 is purer: odorless and whiter in color; dust-free and dry flowing. Pilot processes HD-90 at sub-zero temperatures, eliminating undesirable characteristics and building in the cleansing and sudsing character.

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In Regular, Medium, and Low-Foaming Detergents ...THE KEY IS CMC

Regular, medium, and low-foaming detergents all clean more effectively and thoroughly when Hercules® CMC is included. CMC's particle-suspending properties help loosen and rinse dirt down the drain; dirt is never redeposited on clothes. That's why Essential Chemicals Company of Milwaukee, Wisconsin selected Hercules CMC for its "April," "Trust," and "Kenmore" detergents.

Essential's full line of detergent products supplies the right cleanser for hand washing fine fabrics, family laundry, or general cleaning . . . and they all depend on CMC for thorough cleansing action.

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V558-1

Suds, Shines and SELLS

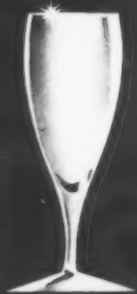
The growing preference for liquid detergent formulations is showing up in the sales picture. Last year there was a phenomenal industry-wide increase in these sales.

And no wonder. Liquid detergent formulations offer real economy; instant solubility in any water; a pleasing fragrance; sneeze-free washing; dishes that dry shining bright; no sink scum to scrub away.

Many of today's best selling liquid detergents are formulated with Atlantic ULTRAWETS. Economy is one reason. High performance characteristics allow a saving on the quantity needed to maintain product efficiency. Add to this saving another one: you can buy the ULTRAWETS at significantly low prices in tank car or bulk lots.

Ask us for detailed information on the ULTRAWETS. Write or wire Chemicals Division, The Atlantic Refining Company, 260 S. Broad St., Philadelphia 1, Pennsylvania.

The ULTRAWETS wet, penetrate, clean and emulsify.



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Complex amine sulfonates—for the emulsification and solubilization of liquids in high salt aqueous solutions.

Oil soluble amine salts—for emulsifying and solubilizing oil in water or water in oil. May be interesting for solubilizing inorganic salts into hydrocarbon solvents.

Acyclic complex carboxylic acid—oil soluble surfactant showing promise in corrosion inhibition. Salts of this material are extremely effective oil in water emulsifiers at low use levels. Upgrades the function of soap.

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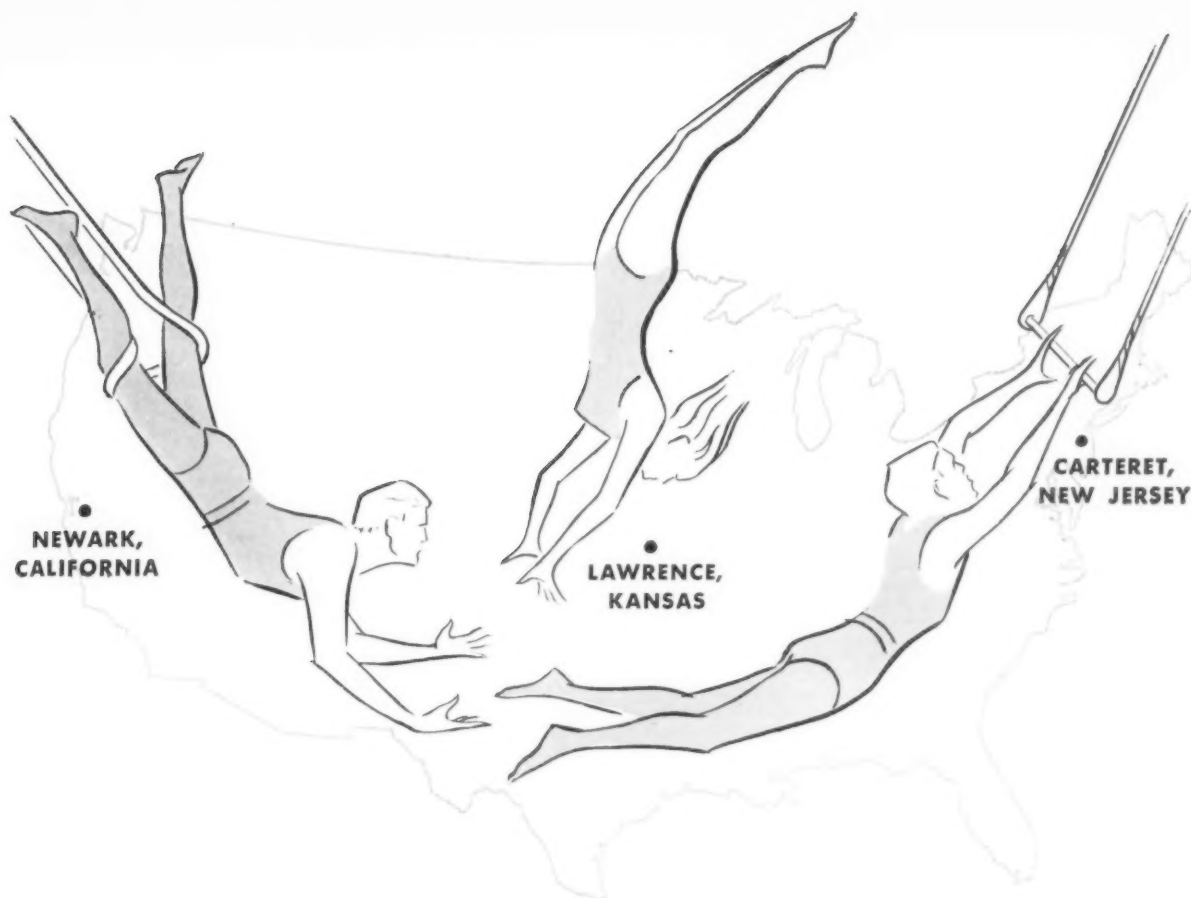
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Dipotassium Phosphate Monopotassium Phosphate
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Disodium Phosphate Tetrasodium Pyrophosphate Crystals
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Three integrated production points . . . east coast, west coast and halfway between! Three good reasons to re-evaluate your phosphates purchasing now and re-discover the advantages of Westvaco's dependable coast-to-coast service.

We are in a unique position to give most users unsurpassed service. Because of the realities of routing, transfers and layovers, Westvaco shipments frequently get there sooner than those of producers who seem much closer on the map.

And when you deal with Westvaco, you deal with the most experienced supplier. We have serviced phosphates users for more than a half-century and were the first fully-integrated producers. We make the industry's longest line of sodium and potassium phosphates. Many important complex phosphates were pioneered by Westvaco.

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- ☐ 3. **Synthetic Detergents**, by John McCutcheon. 445 pages, 56 illus. Basic book covering the over-all subject of detergents including the various types of detergents designated as to class, manufacture, application and properties. Price: \$7.10.
- ☐ 4. **Surface Active Agents and Detergents**, by Schwartz-Perry. Two volumes. Volume I: 590 pages, 51 illus., 4 tables. Covers processes for synthesizing and manufacturing surface active agents, physical chemistry of surface active agents and practical applications of surface active agents. Price: \$12.00. Volume II: Approximately 860 pages, approximately 26 illus. and tables. Covers processing for synthesizing and manufacturing surfactants, special function surfactants and compositions, the physical and colloidal chemistry of surfactants and practical applications of surfactants. Price: approx. \$18.00.
- ☐ 5. **Detergent Evaluation and Testing**, by Jay C. Harris. 220 pages, 26 illus., 15 tables. A critical selection of methods and procedures for the testing of detergents. Price: \$3.75.
- ☐ 6. **Organic Insecticides**, by R. L. Metcalf. 402 pages, 7 illus., 70 tables. Covers most organic insecticides, their chemistry and their mode of action. Price: \$8.50.
- ☐ 7. **Advances in Pest Control Research**, edited by R. L. Metcalf. Volume I: 522 pages, 11 illus., 13 tables. Covers the most recent advances in all phases of the applied science of pest control. Price \$11.00. (Volume II in preparation)
- ☐ 8. **Handbook of Pest Control**, by Arnold Mallis. 1068 pages, over 200 illus. Latest reference volume dealing with household and industrial pests, insecticides, rodents, etc. Price: \$9.25.
- ☐ 9. **Handbook of Cosmetic Materials**, by Greenberg-Lester. 467 pages. Covers the properties, uses and toxic and dermatological actions of over 1,000 materials selected in response to a questionnaire sent to cosmetic manufacturers. Includes a chapter on the skin by Howard W. Haggard, Director, Applied Physiology Laboratory, Yale University. Price: \$12.50.
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B-W	Na ₂ O:1.60SiO ₂	19.5	31.2	58.5°
Kasil #1	K ₂ O:2.50SiO ₂	7.90	19.8	28.4°
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PQ DRY SILICATES				
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GD	1:2.00	27.50	55.0	sodium disilicate
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Metso Anhydrous	1:1*	51.00	45.5	sodium metasilicate anhydrous
Metso Granular	1:1*	29.0	28.7	sodium metasilicate pentahydrate
Metso 99	3:2*	36.70	24.2	sodium sesquisilicate hydrated
Metso 200	2:1*	60.80	27.5	sodium orthosilicate concentrated
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31



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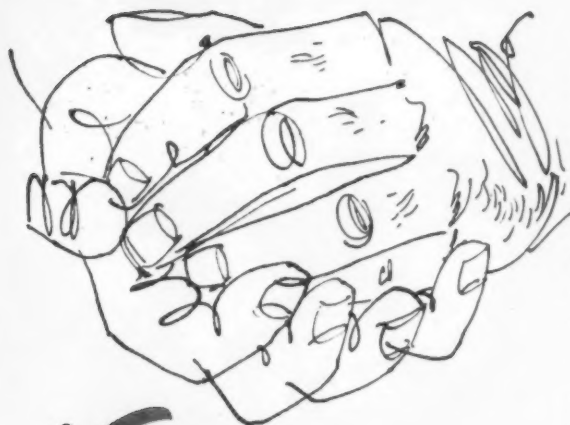
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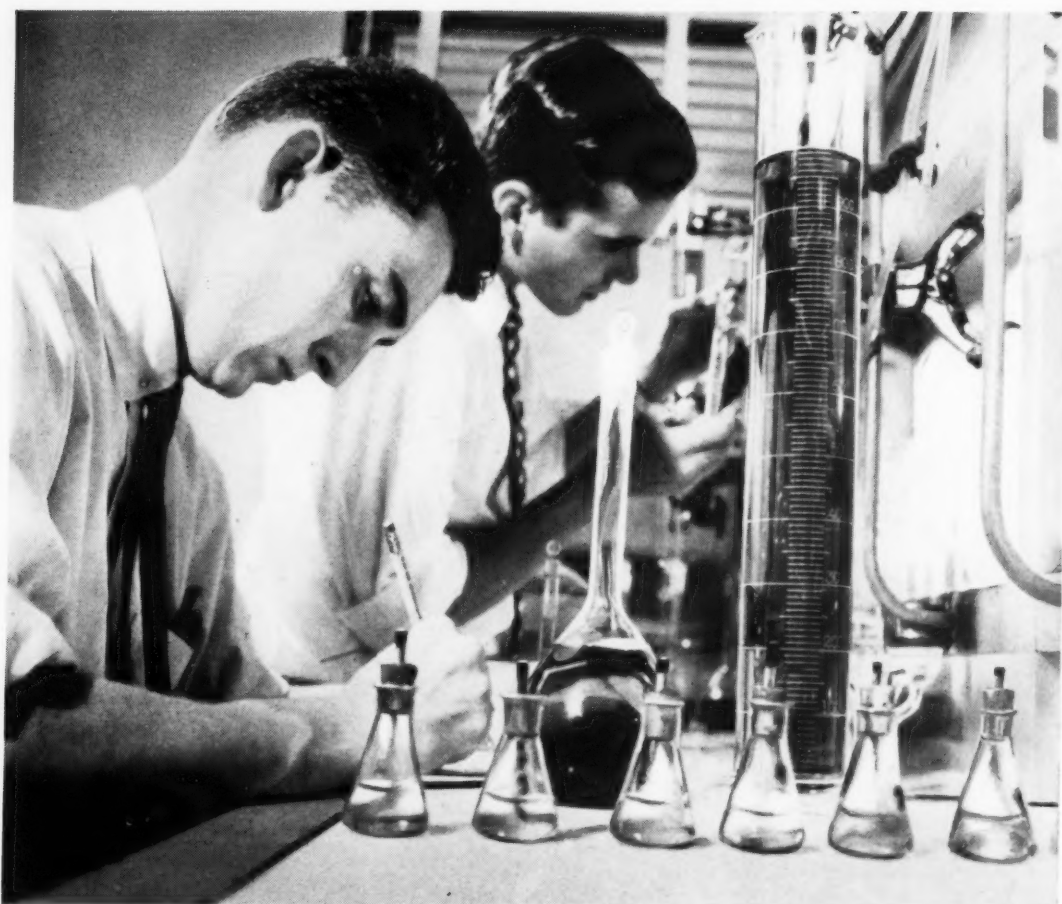
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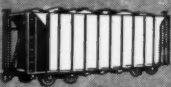









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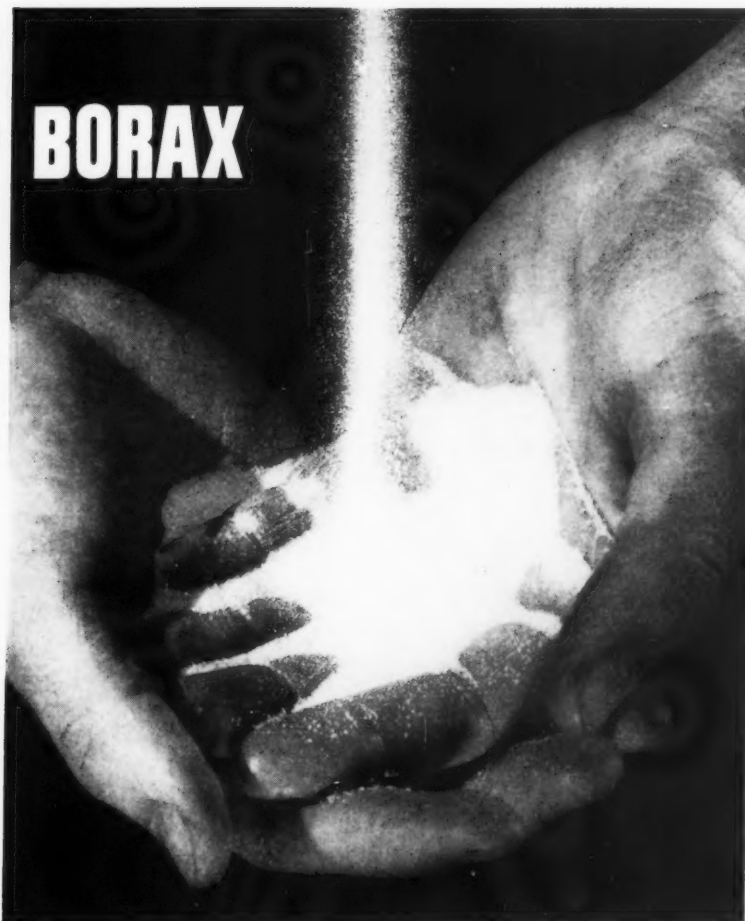
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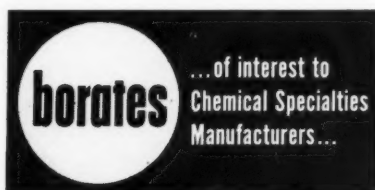
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Appearance Clear, fluid liquid
Color Colorless to pale yellow
Odor Mild, characteristic
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Freezing Point -3° C
Cloud Point 10° C

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Phenol Coefficients at 20° C
(U.S.D.A. METHOD)

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... in brief

as the editor sees it . . .

 **ECONOMY . . .** When an economy wave strikes, common sense frequently goes out the window. Too often Cadillacs for the brass are considered vitally essential, but soap and paper towels in employees' washrooms may be classed as an unnecessary luxury. Witness recently the case of the city hall at Syracuse, N. Y., where an economy drive by the mayor brought the elimination of soap from the ladies' washrooms. Needless to say this made said ladies very unhappy and they openly staged a campaign to collect funds to buy soap. In time lost, we'll gamble it cost the city ten times the cost of the soap.

But economy waves are like that. With a lot of fanfare aimed at the gallery, peanuts are saved, saved with little consideration of their psychological effect. We imagine the idea is to impress everybody with the farreaching effect of such economies. What other reason could there be? Money saved on supplying soap and sanitation supplies to employees can only be insignificant. Yet the number of firms which cut down in this direction when things get a little tough is probably high. The thinking of management, if it can be thus dignified, in such instances is difficult to measure in terms of plain horse sense.

* * * * *


 **NO PROFIT . . .** Up until a year ago, profits in loading and marketing aerosol products were pretty good. But since that time, keener competition has raised its ugly head and the situation has changed. Profits in aerosol loading have just about reached the vanishing point. The market for some products has stagnated badly and idle aerosol lines have become too numerous for comfort. A few aerosol loaders admittedly are in a bad way. All of which dates back to a succession of price cuts extending over a year period. Some loaders, seeing the handwriting on the wall six or eight months ago, have

switched the emphasis of their operations to compounding and filling conventional packages.

In a business as new as aerosols, we imagine that something of this sort was inevitable. The arrival of a recession in general business did not help matters. Then when we consider that current installations of aerosol equipment can handle more than three times present gross output, we can understand the growing pains.

Sure, some loaders are busy. But at what prices? The fact remains that the present situation could have bad repercussions, bad for marketers. At cut prices, they are getting cut service whether they know it or not. And when the time comes that they need fast and extensive loader service, it could be among the missing. We feel that to a considerable degree, the present situation stems from shortsightedness on the part of a number of marketers and a few loaders. It is not designed to aid the future of the aerosol business.

* * * * *

 **MARKET STUDIES . . .** Over the years, we have come to view most market studies with a fishy eye. Realizing that some sort of market investigation is essential prior to marketing innumerable new products, we still feel that too many of these studies come up with conclusions which can or do mislead manufacturers. Often there seem to be extenuating circumstances which render market studies more than useless, which put marketing efforts on the wrong track.

The most recent instance of market studies which cost the manufacturer some millions of dollars to make and which proved to be worthless was the case of the Edsel automobile. Apparently an economic recession was not included in advance calculations. Then we also have some instances right in the field of household chemical specialties, instances where market studies apparently came up with a green light which

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WA PASTE. A neutral synthetic detergent and wetting agent whose active ingredient is mainly sodium alkyl sulphate. Excellent sudsing, wetting, emulsifying, dispersing and penetrating properties. Ideal for paste and liquid shampoos, bubble baths, liquid detergents, liquid car washes, liquid floor cleaners, insecticides, glass cleaners, rug and upholstery cleaners.



ES PASTE. A specially developed synthetic detergent whose active ingredient is mainly modified alkyl sulphate. Offers exceptional efficiency and stability over a wide range of operating conditions. Wetting, penetrating, sudsing, dispersing and emulsifying properties make it excellent for the preparation of liquid shampoos, bubble baths, liquid detergents, liquid floor cleaners, insecticides, car washes, emulsion cleaners.



IVORY BEADS. A medium titer, neutral white soap of exceptional purity and quality. Well suited for compounding products where a mild but effective soap is required—hand soaps, polishes, protective creams, dishwashing compounds and paper coatings.



AB GRANULES. A neutral synthetic detergent, wetting and emulsifying agent of the 40% active sodium alkyl aryl sulphate type. A white product that can be used effectively in the blending of bubble baths, car washes, dishwashing compounds, dairy cleaners, insecticides, laundry detergents, rug and upholstery cleaners.



K LIQUID. A modified, highly concentrated ammonium lauryl sulphate—modified for increased sudsing and mildness. Exceptionally low cloud and pour points. Highly fluid and easy to handle. Ideal for clear liquid shampoos and liquid detergents where high foaming is required.

Procter & Gamble's Products Research Department will gladly supply you with information on how you can save time and money when you formulate with Procter & Gamble products. You can also get technical help in connection with their use by writing to:

Procter & Gamble

BULK SOAP SALES DEPARTMENT,
P. O. BOX 599,
CINCINNATI 1, OHIO

later happenings proved to be decidedly wrong.

Was the market survey wrong or were its findings ignored or misinterpreted? Often a manufacturer with a mind set in advance will go ahead in spite of survey warnings. Usually the motivating factor here is a competitor who has marketed a similar product. Maybe the market study is taking the rap which it does not deserve. But be that as it may, we have seen too many alleged studies mislead for one reason or another. That's why we view them with a fishy eye,—or maybe it's just our completely suspicious nature.

* * * * *



POLYMERS . . . Recently while talking to the plant manager for a floor wax manufacturer, we noted sample bottles of three new polymers on his desk. Curious, we asked how he liked them. He admitted that he didn't know, hadn't had time to test them out, hadn't had any word thus far from his laboratory. "As a matter of fact," he continued, "we're still working on a couple of others that came in ahead of these. The new ones are coming in faster than we can handle them. At the same time, we can't afford to pass any one of them by. Just a little behind on our test work. Just too many polymers all at once."

Behind the advent of new polymers, we feel, there lie some marked changes in the future of floor waxes and polishes. Actually, these new raw materials spell out the advent of a revolution in polish manufacture. The finished products of the future may bear little resemblance to those conventional items to which we have grown accustomed over the years. No foolin', the revolution sure is here.

* * * * *



CONTRIBUTIONS . . . The custom of jobbers and distributors of finished chemical specialty products designed for industrial use requesting contributions from their supplying manufacturers for various and sundry purposes is an old one. Sometimes it's to help an advertising campaign, sometimes it's to aid the jobber to put out a special catalog, and sometimes it's for something else. Unless the jobber is a pretty large customer, these requests are invariably annoying to the manufacturer. And right now with some of the profit cream off the milk,

these "demands" are more annoying than ever.

Of late, it seems that there has been something of a rash of these contribution requests, some from jobbers whose business with the manufacturer is really peanuts. In one recent instance, the amount requested was more than the gross business done with the jobber in a year. Certainly, the manufacturer has to draw the line somewhere. Conceivably he could go broke handing out endless contributions.

How to handle such requests? If they come from firms where sales do not warrant any donation, we feel such requests should be ignored. In our book, such gall deserves no other treatment. If the account is a sizable one, then circumstances can determine the contribution, if any. And any manufacturer can rest assured that his fellow manufacturers are in the same boat. All are being picked on, and not all are soft touches. It's something to remember.

* * * * *



KNOW-HOW . . . A new rash of inquiries from fellows who want to manufacture sanitation chemicals and will we please send them the name of a book of formulas and other necessary information, has broken out. This happens periodically. Obviously, they have little or no technical background in chemical formulation of any kind. Obviously, they are dumb or they would not write such letters.

Then there are the blokes who feel that a subscription to this magazine costing a few dollars per annum should be the key to assured success as a manufacturer. If it fails to assure such success, we are obviously derelict in our duty to our readers, every reader, even though he be a No. 1 dolt. If we cannot supply the answer to every manufacturing problem for that greenhorn, then what good are we? Why don't we quit and go to selling apples or something? If the magazine can't put a fellow into manufacturing and keep him there, what do we publish it for?

A lot of these letters we do not publish, mostly because we don't want people to know that such goons read this book. We're just honestly ashamed. But, nonetheless, they go on and on, month after month, year after year,—“please let me know about a good formula book and where I can buy the right machinery”—quick, Clarissa, hand me that pistol!

SHULTON BENZYL ACETATE



There is no finer . . . Shulton benzyl acetate, F.F.C., is made to meet the particular requirements of the soap and perfume industries. In addition, Shulton benzyl acetate is also available in Technical grade for applications that permit this economy. Shulton offers an extensive range of benzyl compounds, in U. S. P., N. F., or Technical grades, specially manufactured for soap, perfume, and pharmaceutical uses: benzyl alcohol, benzyl benzoate, benzyl n-butyl ether, benzyl salicylate, and dibenzyl ether. Whatever your benzyl needs, look to Shulton for the finest.

Technical data, samples, and additional information, on request.

SHULTON
FINE CHEMICALS



FINE CHEMICALS DIVISION
SHULTON, INC.
ROCKEFELLER CENTER
NEW YORK

as the reader sees it . . .

Caption Switched

Editor:

Thanks for the news story in the February issue of *Soap & Chemical Specialties* on our new nitrogen gas filling system for pressurizing aerosol containers for dispensing viscous products. However, something was lost in the translation—the photograph (pg. 151) is of our pressurizing device and not an aerosol pressure tester as the caption of the picture indicated. Since some readers might be confused by this wrong caption, I sure would appreciate it if you would recaption the picture.

William Scheck
Builders Sheet Metal
Works, Inc.
New York City

Consider the picture recaptioned! The new device illustrated in February *S&CS* is the new Builders' nitrogen gas filling system and not an aerosol pressure tester as we called it. Ed.

—★—

"Out and Out Robbery"

Editor:

Thanks for the little "blurb" in the March issue of *Soap & Chemical Specialties* about Bob Solly holding his breath at the National Sanitary Supply Association trade show and convention in New York, March 22-25.

You may be interested to know that I am no longer holding my breath. It has already been all removed. The plumbing firm sent us a bill about two weeks ago. I have been gasping ever since. The charges at the Conrad Hilton Hotel (Chicago) in two previous (NSSA trade) shows were \$27.00 and \$22.00, respectively. The New York show cost us exactly \$265.00. Needless to say, this is "out and out robbery" in our opinion and (for) what it is worth, we would recommend that the (National Sanitary Supply) Association never hold an-

other trade show and convention at the Coliseum.

Robert Solly
Harley Soap Co.
Philadelphia

In case you missed the item on page 226 of the March issue we mentioned that Bob was holding his breath waiting for the bill from the Coliseum for installing a hot water heater at the Harley display at the Show. Harley demonstrates their "Cremedic" hand cleaner at a sink with hot water. But at the Coliseum there is no hot water available on the exhibit floors. In order to provide it the Coliseum installed a hot water heater at the cost indicated by Bob. Ed.

—★—

Watch . . . "P's & Q's"

Editor:

We are always pleased when any of our publications are quoted. We, therefore, noted with interest your excerpt from "Silicate P's & Q's" of February, 1958 on Page 177

Thomas J. Kinsella (left), president of Barrett Division of Allied Chemical & Dye Corp., New York, presents safety plaque marking completion of 3 3/4 million man hours without accident at company's Frankford, Pa., plant, to A. A. Rosenau, (center), plant safety supervisor and W. J. Wisniewski, president of Local 12-667, Oil, Chemical and Atomic Workers Union. Frankford plant has 1,000 employees. The unit has not had any man-hours lost through accidents since 1956 and has had only seven such mishaps since 1952.



of the March issue of *Soap & Chemical Specialties*.

We would like to think that "Silicate P's & Q's" is so well known that its authorship is also. We do not believe, however, that is fact and so when you do excerpt from "P's & Q's" we would appreciate the showing of the company name.

Thanks very much for your use of our material.

Frances M. Suarez,
Advertising Manager,
Philadelphia Quartz Co.,
Philadelphia

In spite of the fact that we feel that "Silicate P's & Q's" is well and favorably known as being unmistakably the property of Philadelphia Quartz Co., we will be sure to include the company name in future abstracts from "P's & Q's." The omission of the Philadelphia Quartz name in the March issue was strictly an oversight. Ed.

—★—

Graustein in ARF Post

A. Robert Graustein, Jr., marketing research director for Lever Brothers Co., New York, has been named a vice-chairman and a consultation panel chairman of the Advertising Research Foundation's technical committee.



R. W. Thomson (right), president, Thomson Chemical Company, Lima, Ohio, and H. V. Jacoby, sales and plant manager (standing), discuss future chemical requirements with C. J. Farcasin, Wyandotte representative.

"Wyandotte products and technical service have aided us materially"

—reports R. W. Thomson, president, Thomson Chemical Co.

"From my extensive background in the chemical industry, I know how important technical service is to the many facets of our business . . . I also know good technical service when I see it. Based on our 10 years' close contact with Wyandotte, we know their technical service is most helpful.

"In fact, we credit Wyandotte technical service with aiding us materially in bringing our products up to their present high efficiency.

"Wyandotte products are also exceptional. For example, since 1947, we have used Wyandotte Carbose* exclusively in our famous LAUNDR-EEZ® to help make clothes wash whiter and brighter . . . it makes clothes rinse better, too. And

due to the over-all qualities of Laundr-eez, it is excellent for hand dishwashing and other household tasks like cleaning stoves, refrigerators, painted walls and woodwork.

"We have thousands of customers who say Laundr-eez is the greatest all-purpose detergent they've ever used. What's more, they tell us it goes farther . . . stretches their cleaning dollars.

"Little wonder we're proud to say that we buy Carbose, Kreclon*, Soda Ash, and Bicarb, as well as other ingredients, from Wyandotte."

If service and satisfaction weigh well with you, why not call in a Wyandotte representative and discuss your requirements with him? It could be the beginning of a pleas-

ant customer-supplier relationship that could profit both of us by working together over the years. *Wyandotte Chemicals Corporation, Wyandotte, Michigan. Offices in principal cities.*

*REG. U.S. PAT. OFF.

Wyandotte

CHEMICALS

MICHIGAN ALKALI DIVISION

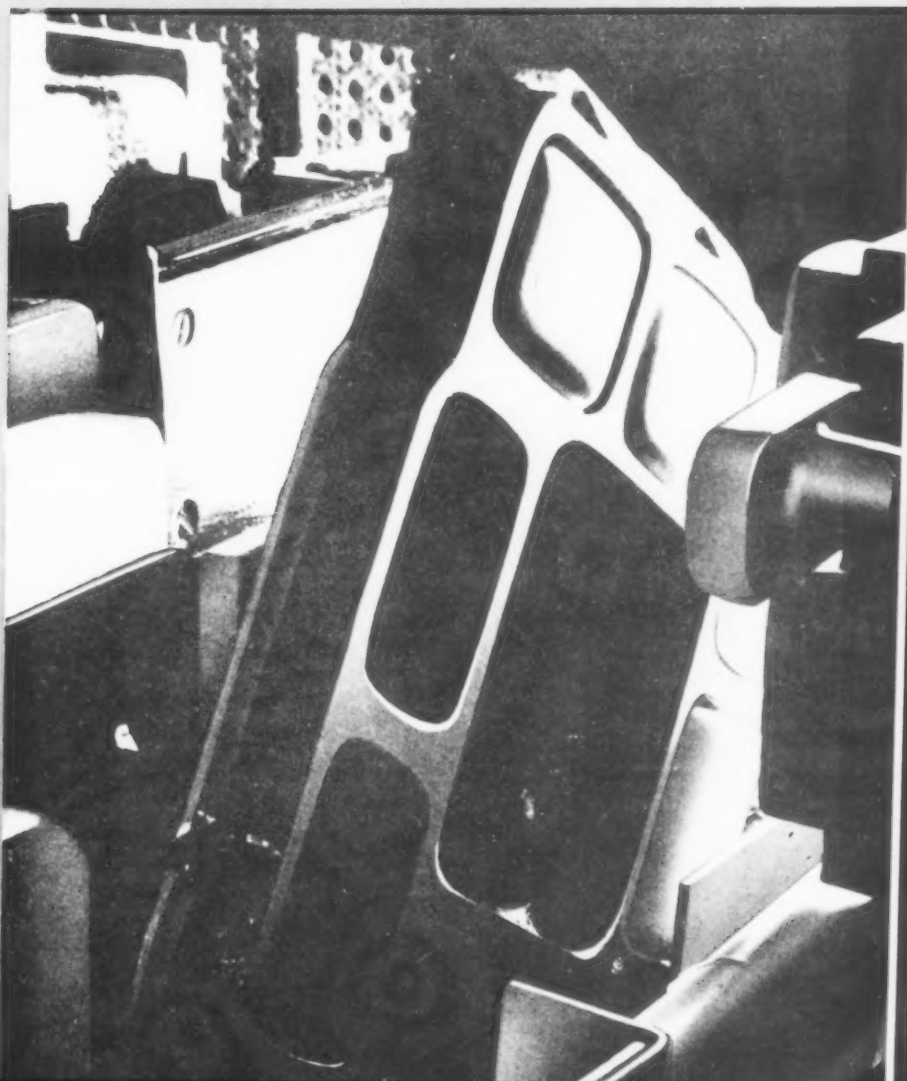
Pacing Progress with Creative Chemistry

SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA
CHLORINE • MURIATIC ACID • CALCIUM CARBONATE
CALCIUM CHLORIDE • CHLORINATED SOLVENTS
GLYCOLS • SYNTHETIC DETERGENTS • OTHER ORGANIC
AND INORGANIC CHEMICALS

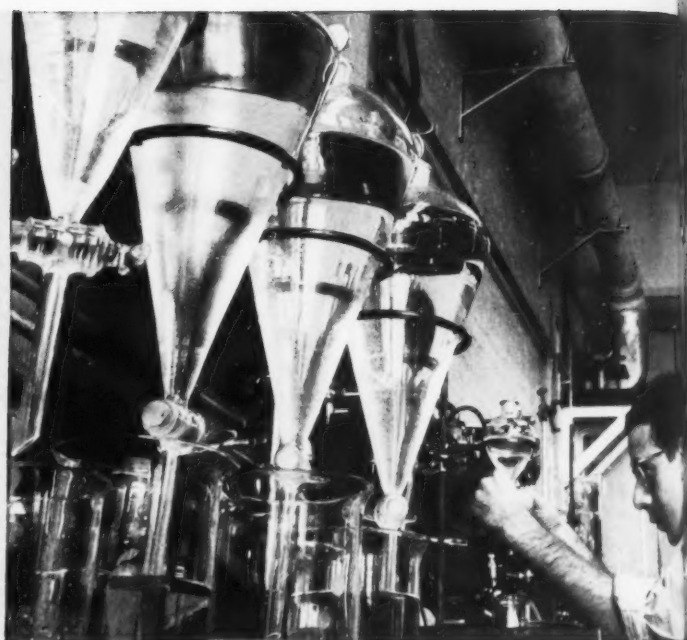
Detergents . . . Cleansers . . . Soaps . . .

High speed stamping of "Camay" toilet soap at plant of Procter & Gamble Co. Shiny, clearly stamped soaps are a must in today's competitive toilet soap market. See article on soap stamping beginning on page 53.

- Aerosols**
- Detergents**
- Dishwashing compounds**
- Floor scrubs**
- Glycerine**
- Hand cleaners**
- Laundry soaps**
- Liquid soaps**
- Metal cleaners**
- Potash soaps**
- Scouring cleansers**
- Shampoos**
- Shave products**
- Soap powders**
- Starch**
- Steam cleaners**
- Medicinal soaps**
- Textile detergents**
- Toiletries**
- Toilet soaps**
 - and other detergent**
 - and soap products**



Givaudan aromatics—keystones of progress in soap perfumery



The tremendous variety of Givaudan aromatics is the result of a long and successful research program designed to isolate and synthesize the perfumes of nature in laboratory and factory and to add new aromatics unknown to nature. Constant improvement in production methods has made them the standards by which chemical purity and olfactory quality are measured. Listed below are a few from the hundreds of these Givaudan "keystones of progress":

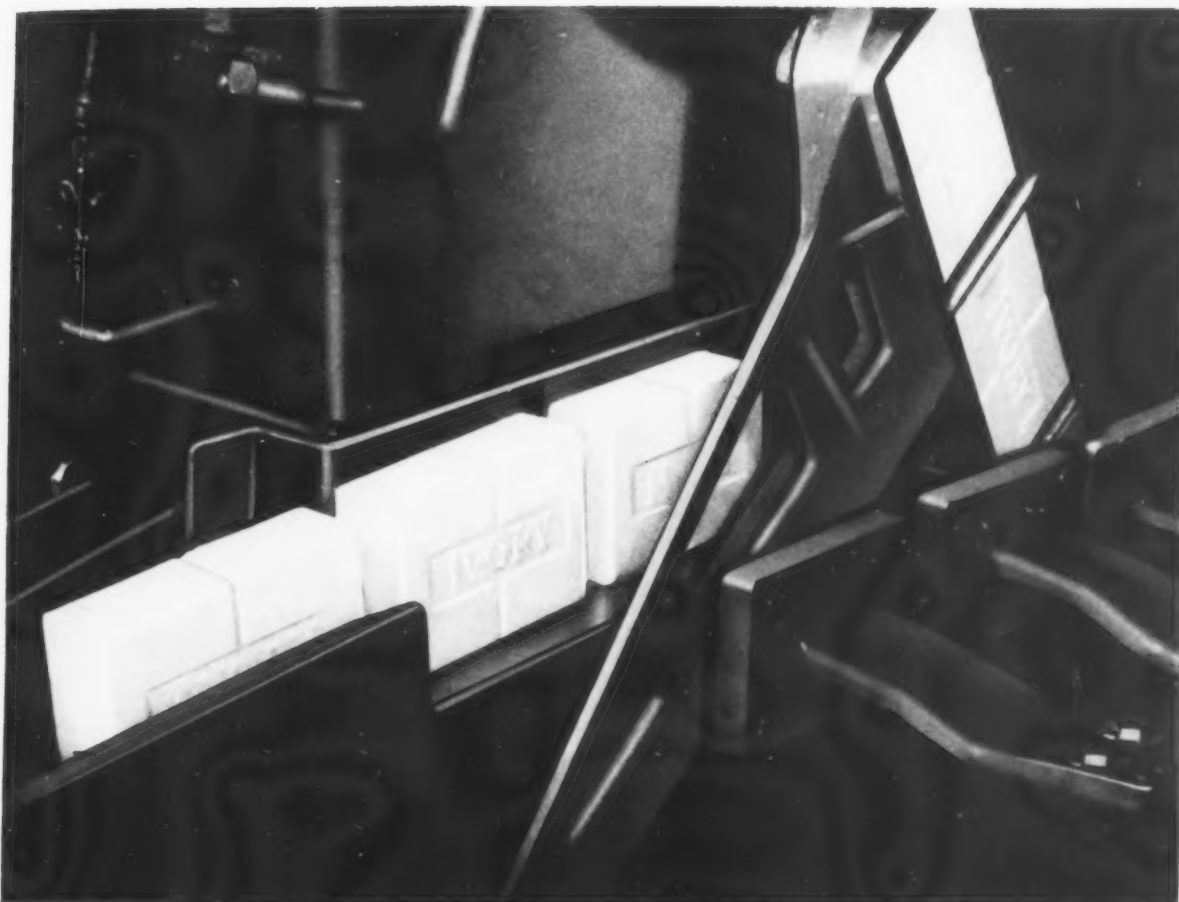
Aldehydes, Fatty: C-8 to C-12
 Amyl Cinnamic Aldehyde (Buxine®)
 Amyl Salicylate
 Anisic Aldehyde (Aubepine Liquid)
 Benzyl Acetate
 Carvacrol Technical NP
 Cinnamic Aldehyde, Alcohol & Esters
 Citronellol and Esters
 Cyclamen Aldehyde
 Dimethyl Anthranilate
 Geraniol and Esters
 Heliotropin
 Hydroxycitronellal (Laurine®)
 Indole

Ionones (Irisones®)
 Isobornyl Acetate
 Linalool and Esters
 Methyl Diphenyl Ether
 Methyl Ionones (Raldeines®)
 Moskene®
 Musk Ambrette
 Musk Ketone
 Musk Xylol
 Para Cresol and Derivatives
 Phenyl Ethyl Alcohol and Derivatives
 Styralyl Acetate (Gardenol)
 Terpeneol and Esters
 Versalide® (polycyclic musk)



Leaders in Aromatic Chemical Research

GIVAUDAN-DELAWANNA, INC.
 321 West 44th Street • New York 36, N.Y.



High speed machine stamps "Ivory" soap in a Procter & Gamble plant.

SOAP STAMPING

ALL solid soaps are sold either in tablet or bar form, stamped out to a particular form or shape, and bearing engraving or imprints showing the name under which they are sold. To form the finished tablet in this way either hand operated or automatic stamping machines are used. There are many types of such machines having one thing in common, namely, the dies and die boxes in which the cut blanks of soap are pressed out to their final shape. The construction of the dies varies greatly with the type of machine and the shape of tablet required, but as there are certain technical points common to all it might be

By E. T. Webb

London

as well to commence by discussing these.

Household Soap

It is essential for successful and efficient stamping that the soap blanks or bars presented to the stamper should be thoroughly skin dried or crusted. This applies to all soaps frame cooled—whether air cooled or water cooled. In the case of plodded household soap the problem before stamping is usually one of heat removal since the soap leaving the plodder may have a temperature of anything from 30°

C. to 45° C.—too hot for normal stamping and packing. The necessity for skin drying of such soap is lessened because of the peculiar phase such soaps assume, but naturally in the process of removing the heat some skin drying is incidental.

If the soap surfaces of a cut blank are wet efficient stamping is impossible, not to mention subsequent irregularities that are certain to arise when such soap is wrapped and packed.

It is also important to choose a form or shape of tablet that will require the minimum of soap movement in the die. The ideal form of tablet, for efficient stamping, is

one that can be stamped from a blank of almost the same dimensions as itself, so reducing the operation to a mere finishing off and printing process. This sort of thing is more easily achieved on automatic machines than on ordinary hand stampers. One difficulty presents itself when working in this way. Because the blank has almost the same dimensions as the completed tablet, and also because the dies are very tightly fitting in the collar of the die, the entrapped air between the dies and the soap has some difficulty in making its escape. When air is so trapped the engraving and general finish of the tablet is somewhat blurred and less bright. To overcome this cushioning effect of the entrapped air it is not unusual to provide vents on both dies.

As many as 20 vents of about 1/32 inch diameter may be accommodated on each die, and these all connect with a large diameter vent through which all the air and some soap finds its way out at the side of the die. The vents do not leave any marks on the surface of the stamped tablet. For one thing they are, for the most part, situated at the deepest part of the die surface which generally is somewhere in the engraving. In some quarters there is some doubt about the efficacy of venting in this way, and all I am prepared to say is that in no case do vents make matters worse but there are instances, especially when operating with soft soap, when they greatly contribute to a definite all round improvement in tablet appearance and general efficiency of operation. It is important of course that the vents should be thoroughly cleared of soap every night at shut down or at any time when the dies are likely to be out of commission for more than one hour. If this is not done the soap will solidify and so prevent proper functioning of the vents when the dies are next put into commission. As it only takes a few minutes to clear the vents this operation can never be burdensome.

Until fairly recently dies were always made of bronze — a

metal chosen because of the ease with which it can be worked and engraved, offering a highly polished surface and one easy to keep bright and clean. In its capacity as a die making metal it has served the soap industry very well indeed. Of late however much suspicion has been levelled at copper as a soap poisoner particularly in regard to its effect on rancidity, and as a result bronze because of its high copper content has very definitely fallen into disfavor. In addition to this, and perhaps more to the point, is the fact that bronze is a comparatively soft metal, and is unable to work on high speed machines without showing quick wearing defects. This involves expensive die maintenance and frequent renewals in order to maintain the standard of tablet production required. When working dies at a speed of 20 to 30 strokes a minute the life of a die and its mould may appear to be sufficiently long, but at speeds of 100 to 150 per minute the position will be very different and much and very rapid wear takes place. The fact is that bronze dies cannot stand up to such speeds. The wear which takes place between the dies and the collar results in soap "feathering" which entails manual handling of each stamped tablet in order to trim it before wrapping or packing. At speeds of between 100 and 150 per minute this is clearly impossible. The answer to all this is to use monel metal collars and stainless steel dies. With such equipment no wear of any kind takes place between the collar and the dies. These dies are expensive to buy because of the difficulty of working and engraving stainless steel, but the first cost is the last as maintenance charges are eliminated, and good quality stamping is assured at all times.

Such metals are only suggested for high speed stamping. It is extremely doubtful whether they are feasible for hand stampers or even for any machine working below 30 strokes per minute.

It has already been suggested that the aim should be to so arrange

matters that the flow or movement of soap in the die box during the act of stamping should be kept at a minimum. It is also recommended in the interests of good working, to avoid embossed engraving of the soap—it should always be set into the soap—and only very shallow engraving should be used whenever possible. Also, the inset should be levelled or set at an inclined angle, and never with the sides of the inset at 90° to the soap's surface.

In some cases the blank may be automatically trimmed just before it enters the die box so that it will fit more neatly into the die box. This contributes greatly to the reduction in soap movement in the die. As an example, a rectangular tablet destined to have even slightly rounded off corners may have its blanks slightly trimmed at its corners before entering the die box. When feasible such pre-trimming should be used as it greatly assists in reducing the movement of the soap in the die.

Toilet Soap

For toilet soap stamping all the foregoing is relevant apart from the die venting which is not recommended.

The conditioning of toilet soap, and also plodded bar produced household soap, prior to stamping and packing is also different from that required by household soap. Plodded soap is always warm; in fact its temperature may range between 30° C. and 45° C., and the problem here is not so much one of skin crusting but rather one of heat removal.

Generally speaking, the practice is to remove as much of the soap heat as possible between the plodder and the stamper, but in certain isolated cases it is preferred to stamp the soap while warm, cooling it off after leaving the stamper.

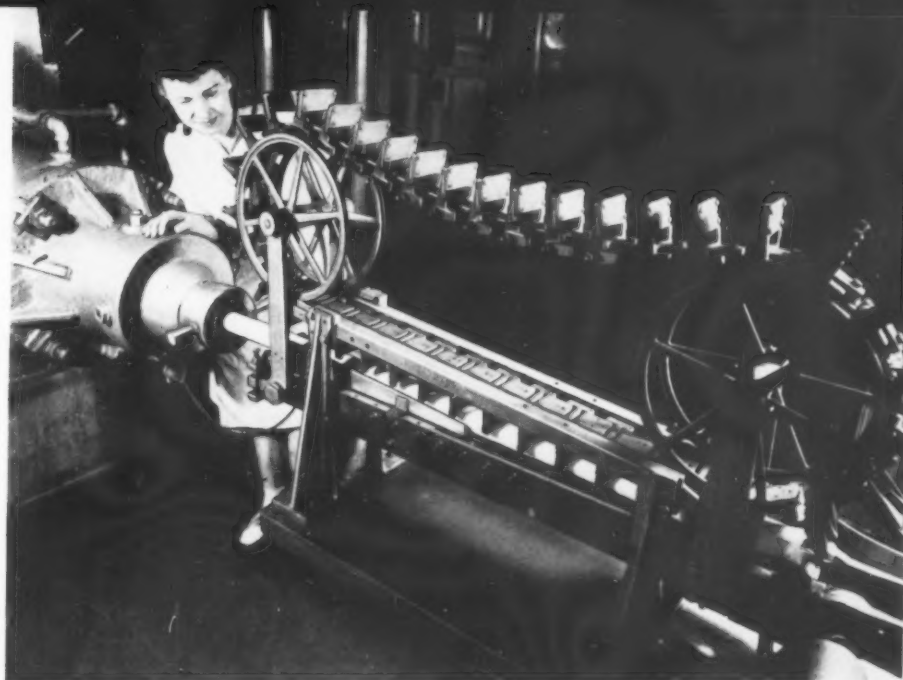
The latter method is adopted primarily to check any tendency of the soap to crack in use. The basic idea being to make the soap flow as much as possible in the die box during the stamping, and in so doing cause a very efficient mixing. In order to achieve the maximum

movement the soap blank is given a circular cross section even when stamping rectangular shaped tablets. Very naturally when such a circular blank is smashed out to a rectangular shape a very considerable movement of soap occurs in the die—but it must be said in passing that this method completely fails to eliminate soap cracking, the reason for which it is used.

A point to be made is that when soap of 30° C. or upwards is stamped at high speed on a machine, the surfaces of the dies quickly reach the temperature of the soap. When this happens stamping efficiency falls off very considerably because of soap sticking to the dies. In such cases water cooling of the dies is really essential. Actually it is not difficult to do this as there is usually plenty of metal in the die which permits of scooping out a cavity just behind the die surface large enough for the free flow of water. Flexible piping of course being used for the input and output of the water to and from the dies. With such an arrangement soap at any temperature can be easily stamped on a high speed machine.

Actually, I am of the opinion that water cooling of the dies in this way is to be recommended for soap stamping at any temperature. The soap blanks are invariably, even when the blanks have been precooled, at a higher temperature than that of the cold water drawn from the mains and which is flowing through the dies. As a consequence a mild form of condensation (a very slight film of water) takes place on the cold surfaces of the dies. This light deposit of moisture seems to have a lubricating action which remains constant at all times. Actually the deposit picks up some of the salt and glycerine that may have been used as a general lubricant, and becomes in a very real sense an excellent lubricator.

More often than not a slight deposit of moisture is even formed from the humidity of the air because of the difference in tempera-



After kneading and mixing, milled soap is compressed and extruded as a hard cylinder, which is cut into short lengths and passed to stamping machine.

Procter & Gamble Co. photograph

ture between the dies and the surrounding air. Of course the condensation achieved will be much greater when handling soap at 30° C. or over, than when dealing with soap at 15° C., but excessive condensation may always be eliminated by controlling the temperature of the water circulating in the dies. Incidentally, it is interesting to note that the amount of condensate thus caused never seems to increase to a point at which it could cause any embarrassment. Although continuous condensation takes place the build up of condensate is probably held in check by the amount carried away on the surfaces of the stamped tablets. It will be understood of course that the amount of condensate involved at any given instant is very small indeed. The tablets stamped out in water cooled dies are always brighter and better looking than those not so stamped, and the stamping efficiency is also much higher. It is possible that two things contribute to this result (a) the fine film of condensate on the surface of the dies and (b) that the low temperature of the die surfaces causes a slight shrinkage of the soap away from the die surfaces. Not much of course in terms of measurement but just enough to assist in the easier liberation of the

soap tablet from the metal surfaces of the die.

The necessity for the water cooling of the dies working on hand stampers or other slow moving machines is not so evident although it may be used if thought necessary.

Mould Types

There are three distinct types of moulds separately known as (a) capacity moulds, (b) pin type moulds and (c) tulip moulds. The former is one in which the cut blank of soap presented to the stamper has the same weight as the finished tablet. This mould is used exclusively for the stamping of rectangular tablets. The mould (b) is the type on which the blank of soap presented to the stamper is cut to a greater weight (could be up to 35 per cent greater) than that of the tablet to be stamped out of it. It is used exclusively for the production of oval or round tablets and, in fact, any shape not stampable on the capacity or tulip type mould. Another distinction between these two types of mould is that while the soap blank can be accommodated in the capacity mould before stamping, the blank of the pin die press is too long to permit of its entry into the mould proper. The blank in this case is laid across the lower half of the mould and it

is actually forced into the mould by the descending top half of the die. The need for the capacity mould derives from the fact that a blank cut to the exact weight of a finished round or oval tablet and in such dimensions that it could enter the mould before stamping would produce a tablet with a well defined and most disfiguring water mark at both ends of the tablet. This water mark is avoided by cutting long and over weighted blanks, circular in cross section, for the pin die mould. The excess soap cut off at each end of the mould in the process of stamping is regarded as scrap and can be returned to the mills, if quite clean, for re-entry into process. This type of mould is used only on toilet soap production for which many and varied shapes are required.

The tulip die is used exclusively on Marseilles type household soap which is always marketed in cubic form stamped on each of the six surfaces. These dies possess hinged sides, attached to the base of the mould, which open outwards to permit easy entry of the cube shaped soap blank. The mechanism of the machine allows of the automatic and simultaneous closure of the mould when it reaches position 2. In position 2 the four sides are raised to the vertical where they are strongly held in position while the top die descends with sufficient force to press the soap against the sides and bottom of the mould.

In this way the formed tablet received an impression from the top and bottom faces of the die also from each of the sides which are all engraved. In this way all six surfaces of the cube are stamped simultaneously. The machine utilizing this type of mould is always power driven. The mould is fixed to a movable base which causes it to move in an arcwise direction in front of the machine. In position 1 which is at the extreme left of the arc the mould automatically opens in order to permit the easy removal of the stamped tablet inside and for the easy feeding of the new blank of soap. For these

operations the machine is idle for a matter of a second, or a fraction thereof, after which the mould moves round to position 2 at which point the stamping actually takes place.

Then the mould returns to position 1 where it is emptied and recharged with a new blank. Roughly with two moulds working alternately, one to the left and one to the right, forty to fifty tablets can be stamped per minute.

Keep Dies Clean

On all types of stamping machines it is necessary to keep the dies clean in order to maintain a high rate of stamping and to ensure this, it is necessary to lubricate to some extent the soap blanks, the die surfaces, or both. Opinions about the type of lubrication to be used vary quite a lot, but the one most usually chosen is a dilute solution of salt and glycerine. Of course the efficacy of any lubricant must depend on the condition of the soap being stamped and on other factors already discussed, and it is no doubt because of the effect of so many variables, that it is difficult to arrive at a unanimous decision on the best lubricant to be used.

It should be appreciated, however, that no lubricant can succeed if the soap is in a bad condition for stamping and that almost any lubricant will serve when properly conditioned soap is being handled.

Assuming normal soap conditions I prefer a solution containing two per cent salt and six per cent glycerine. Sometimes acetic acid is used and again liquid paraffin. In the case of hand operated stampers it is usual to lubricate the die surfaces as and when necessary, and in the case of automatic machines which are usually provided with a belt feed for the blanks the blanks themselves are lubricated. In fact, this for the most part is the only method of getting the lubrication to the dies without stopping the machine specifically in order to lubricate them, a process involving a high percentage of loss

to production. Actually it is possible to have continuous die lubrication on an automatic machine by providing means for the release of atomized lubricant in the region of the dies. This can be achieved on a Jones stamper for example by installing a small pump, fixed near to and operated by the rocker arm. The latter provides the movement for the operation of the piston of the pump. Two sprays are fixed, one per die, so that the atomized lubricant loads the air surrounding the die surfaces and the soap about to be stamped. The atomized spray produces a very fine deposit on all the vital surfaces just where and when it is needed. By connecting the pump to the stamper an assurance is provided in that the spray will only operate when the machine itself is in production. This avoids over doing the lubrication.

More generally lubrication is obtained by using a regulated drip of lubricant on to the blanks as they move forward on the feed conveyor. Sometimes an occasional blank, say one in 30, is lubricated by hand. This perhaps is to be preferred to the former drip method which unless carefully watched can cause occasional excessive lubrication which is on every count undesirable.

There are many types of stampers in use and roughly they can be divided into two main classes—hand operated and automatic. Actually the former are rapidly falling into disuse, and where still operated they are invariably provided with a motor drive thus making them semi-automatic in character. At least the introduction of power to these machines does take a heavy load off the operator and it does assist in raising the throughput.

The output of an ordinary hand stamper varies very much with the type of tablet it is dealing with and may vary from eight tablets to as high as 35 tablets per minute. I have seen hand stampers turning out 35 tablets of one pound tablets of household soap per min-

(Turn to Page 137)

Automotive Parts Cleaners

By **Isidore Shafiroff**

R. H. Hollingshead Corp.
Camden, N. J.

PARTS cleaners are widely used for pistons, piston rings, valves lifters, fuel pumps, engine assemblies, and carburetors. Typical shop practice involves immersing the disassembled part in a tank or five-gallon pail containing a wire mesh basket to soak for varying periods. After the soaking operation the part is removed, flushed with either kerosene or water, wiped dry and re-assembled. Gaskets are removed prior to cleaning and then replaced. Considerable laboratory and field work on parts cleaners has enabled us to develop laboratory tests which exhibit a high degree of correlation with field performance. Field surveys conducted by our organization gave us an indication of the desirable features of the ideal cleaner. Such a cleaner would possess the following properties:

1. Acceptable odor.

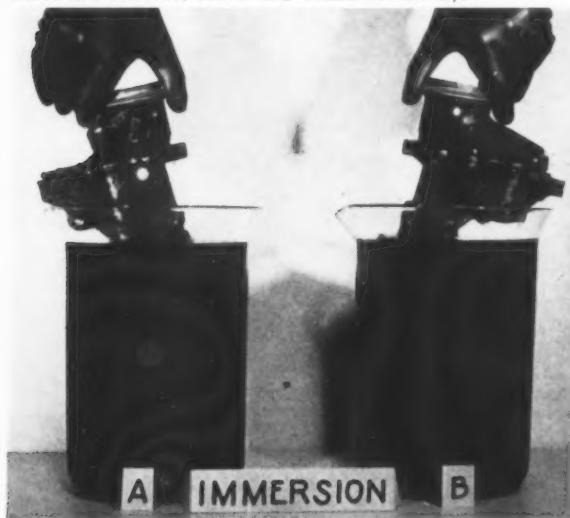
2. Fast cleaning performance.
3. Easy to use.
4. Non-corrosive and non-staining.
5. Non-irritating to the hands.
6. Non-flammability.
7. Long use-life.

Variation in techniques of use among different shops can and has proven to cause divergence of opinion regarding the quality of name brand products. In the poor practice category we find that some operators do not close the pail or tank containing the cleaners. The consequence is a loss of active components through evaporation, and hence diminished effective use life. Another practice, often encountered, is the attempted replenishment of the cleaner with water, kerosene or other solvents. I do not know how extensive these abuses are, but they do occur more often than we are led to believe. Education of the user to discontinue these practices

by the distributors of such products is in order. Reproducible laboratory tests enable the formulator to project his findings and anticipate field performance and consumer acceptance of the cleaner. An excellent paper dealing with the components and performance test methods of cleaners and engine degreasers has been written by Berkeley and Schoenholz (1). Our tests were conducted along parallel lines of approach. In addition to performance, considerable experimental work was undertaken on corrosion and evaporation investigations in order to integrate the various properties of both commercial and experimental cleaners. Our purpose was to establish tentative standards whereby we could guide ourselves in present and future developments.

Aluminum 24ST and stainless steel 4130 coupons, two inches by four inches, were cleaned with

Samples of cold parts cleaners in beakers. Carburetor has been cut into two pieces, one half placed in each beaker. After three minutes halves are removed, rinsed and examined visually.



Corrosion test strips cleaned and coupled. After immersion period in cleaner, strips are removed, rinsed and weighed to determine any losses. Following this they are examined visually.



00 steel wool, then scrubbed with a hot one per cent TSP solution and rinsed with tap water. The coupons were then dipped into ethyl alcohol followed by an acetone dip, allowed to air dry and then weighed.

A standard soil consisting of the following ingredients was prepared:

Asphalt (Hydrolime)	43 gms
Kerosene	100 ml
Engine oil 1120	89 ml
Xylene	350 ml

Essentially this soil is a modification of the test soil given in A. F. Specification 25179A July 26, 1956.

Forty-seven drops of standard soil were applied to the test coupons which were placed on a level surface. Soil is applied in eight rows, six drops per row. The coupons or specimens were then allowed to air dry to a point at which if held vertically no flow of the soil is noted. The coupons were then placed horizontally in a forced draft oven at various temperatures and varying time periods. Table I shows the results obtained at three different levels of time and temperature. Data are also given for the precision of the experiment, and the percentage of panels available for a given degree of precision.

Values for the coefficient of variation illustrate a high degree of precision for the method. To achieve further refinements of precision, large numbers of specimens would have to be prepared and test panels chosen from the lot hovering at the modal value.

Eleven proposed cleaning methods were devised and evaluated against two control formulations which are known to be different visually in cleaning efficiency. Any method which did not yield visual and quantitative differences in cleaning was discarded. Adoption of the Gardner Washability apparatus proved to be effective. Table II illustrates the results obtained after cleaning standard soiled aluminum test panels prepared by baking for four hours at 380°F.

The test procedure consists of wetting a cellulose sponge with water, squeezing out the excess and then applying 10 milliliters of the

Table I. Average Soil Weights and % of Acceptable Standard Soil Specimens

Bake temperature °F.	200	360	380
Time, Hours	2.5	3	4
Total number of specimens prepared	18	17	32
% of total used for tests	66.6	100	37
Average	0.2616	0.1916	0.2016
Coefficient of variation	6.36%	4.39%	2.97%

cleaner uniformly to the sponge. The sponge is then placed in the boat, secured with rubber bands and hooked up to the washability apparatus. The apparatus is run for five complete reciprocations. After each specimen is run, the sponge is cleaned with bar soap and rinsed thoroughly.

Table II. Average Soil Removal from 24ST Aluminum

Formula	Replicates	Average Soil Removal	Coefficient of Variation (%)
Control #1	4	78.7	4.7
Control #2	9	81.0	8.7
(set 1)	4	84.1	10.8
(set 2)			

We believed that some metal substrates may hold the standard soil more or less tenaciously than aluminum. It is conceivable that the cohesive bond between metal and soil should vary among different metals because of surface energy differences. In an attempt to validate or refute this hypothesis between steel and aluminum, experiments were repeated using 4130 steel as the test metal. Specimens were prepared and cleaned according to the procedures followed with

aluminum. Table III summarizes the results obtained.

Table III. Average Soil Removal from 4130 Steel

Formula	Replicates	Average Soil Removal	Coefficient of Variation (%)
Control #1	3	75.8	4.4
Control #2	8	86.3	6.2

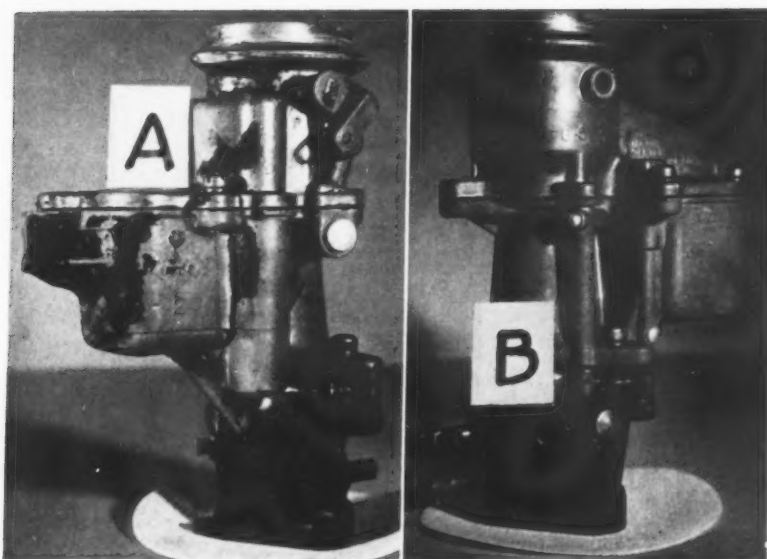
Tables II and III convey some interesting information. Control Formula #1 yielded better precision than Control #2. This can be attributed to the fact that the formula is less volatile than Control #2. Improved uniformity of soil removal on the replicated panels would be achieved by minimizing variation of concentration through evaporation losses.

Statistical methods for small samples (2) were applied to the data obtained for Control #1 on the steel and aluminum specimens. Table IV summarizes the variables needed to arrive at a conclusion of whether or not the substrate contributes to variation in cleaning efficiency.

We may conclude at the 95 per cent probability level that the

After the cleaning and rinsing operation carburetor sections are compared visually for cleaning effects.





Before and after cleaning: Carburetor sections are compared visually for cleaning effects after cleaning and rinsing operation. Unit on left is carburetor before cleaning.

use of Control Cleaner #1 on steel or aluminum will yield the same cleaning efficiency in terms of percentage soil removal. At the present time we have not projected this work to other metals.

Representative metals encountered in carburetor systems are cold rolled strip and sheet steel, zinc base die cast alloys, machine brass, and aluminum. At the inception of this work all of these metals were not available to us, consequently aluminum and steel were chosen for the comparative cleaning phase of the experimental program. We believe that no statistically significant difference in cleaning efficiency will be found among the carburetor component metals and the test metals. Since aluminum and steel were more readily available, they were chosen as the standard surfaces. This does not preclude the use of any of the aforementioned metals as standards.

Relative volatility or evaporation rate of a parts cleaner is a highly significant property. Factors

upon which the evaporation rate has a bearing are:

1. Toxicity of vapors
2. Controlled cleaning rate
3. Use-life of the cleaner
4. Flammability hazards.

Three types of evaporation curves are illustrated. Curve 1 represents the ideal evaporation rate,

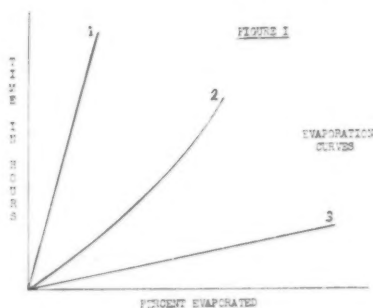


Figure 1

Curve 3 represents an undesirable rate, and Curve 2 represents a typical actual evaporation rate of a parts cleaner.

Curve 1 is representative of a product that achieves maximum contact of the volatile components

with the soiled area. Cleaners possessing this type of evaporation minimize build-up of toxic and flammable vapors. Greater effective use-life of the cleaner can be expected by virtue of minimizing the loss of the active components.

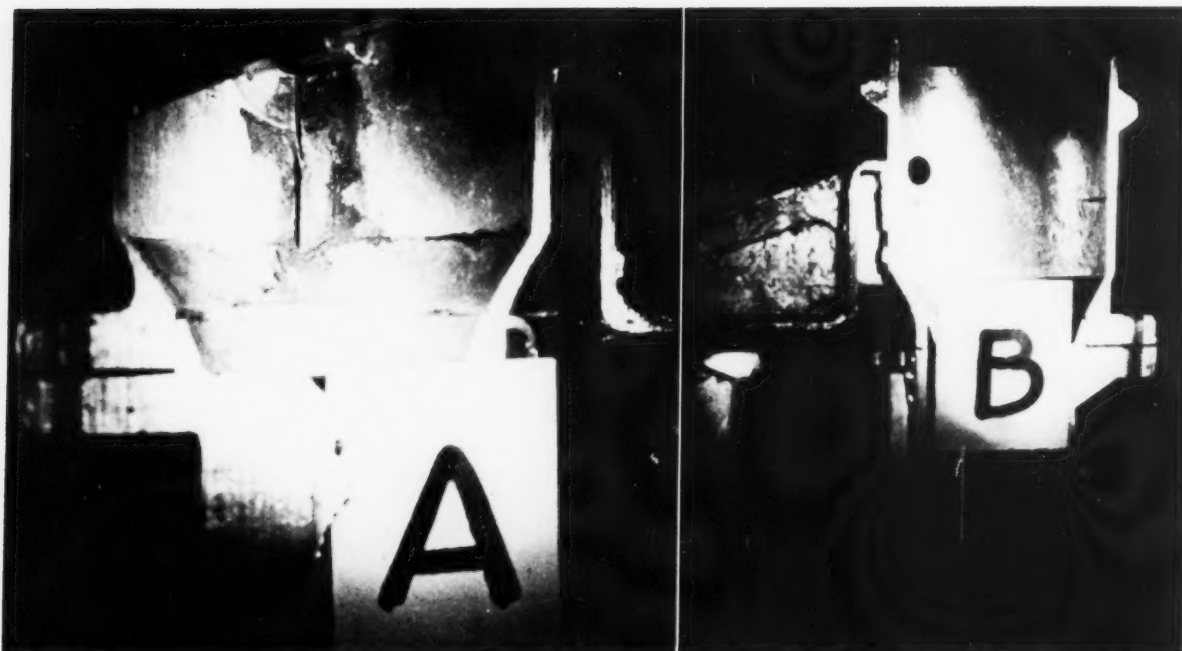
Evaporation characteristic of Curve 3 can bring about a situation directly opposite that obtained with a cleaner representative of Curve 1. Flash point data determined on products approaching Curve 3 were found to differ by as much as 40°F., as compared with cleaners having an evaporation rate approximating that of Curve 1. Curve 2 represents the evaporation of a typical diphasic product. The initial rate of evaporation of the volatile constituents is rapid, followed by a slower rate of the less volatile components until a uniform rate of evaporation by the water component is achieved.

Two formulas, each containing two volatile chlorinated compounds, were prepared. Essentially the products differed only in the ratio of the chlorinated compound content. The second product designated as "B" contained 10 per cent of the less volatile material than product "A." Both formulas contained the same total active chlorinated hydrocarbon content. Partial vapor pressure calculations as an approximation of evaporation rate gave results which show product "A" to be approximately 2.5 times more volatile than product "B." Evaporation experiments correlated with the data obtained via calculations of partial vapor pressures. Differences of about five per cent were obtained between the derived and experimental values in the range of the straight line portion of the evaporation curve. In order to investigate the retardation of evaporation mechanically by way of a soap blanket, diphasic cleaners of varying soap content, which concentrated at the interface, were formulated. Varying soap concentrations to the point of forming a homogeneous phase did not minimize evaporation losses.

A realistic approach to this problem was taken by studying the

Table IV. T Test for Comparison of Means

Metal	No. of * Specimens	Degrees Freedom	Mean Soil Removal	Sum of Squares of Deviations
Steel	3	2	75.8	29.40
Aluminum	4	3	78.7	20.05
$t_{0.05} = 2.57$				



Photograph above shows a close-up of a carburetor section after the cleaning and rinsing operation. Visual examinations of cleaned parts aid in rating efficiency of cleaning solutions.

corrosive properties of some of the more popular cleaners. These products are widely used by maintenance personnel and were assumed to be non-detrimental to the various metals which they contact. Six cleaned and polished SAE brake fluid metal strips ($3\frac{1}{2}$ " x $\frac{1}{2}$ " x $\frac{1}{8}$ ") prepared in duplicate were coupled with a brass bolt, separated by brass washers and immersed in 335 ml. of the cleaner. One set was positioned horizontally so as to be completely immersed in the solvent layer. The duplicate set was positioned perpendicularly in the test fluid so that part of the surface area of the metal projected into the aqueous phase. The jars were sealed with lids and kept at room temperature. After 19 hours the specimens were removed and cleaned with water, alcohol and acetone, and examined visually. If severe corrosion was observed, the test was discontinued. If no evidence of corrosion was present, the specimens were returned to the jar for another 23 hours, removed, cleaned, observed and weighed. Tables V and VI show the visual and quantitative results of three representative cleaners.

Table V. Corrosion Test. Observations After 19 Hours at Room Temperature

	Partial Water Phase	Solvent Phase
Cleaner A	Some black stains and overall discoloration on aluminum. Other metals ok.	Overall slight discoloration on aluminum. Other metals ok.
Cleaner B	Some aluminum staining. Other metals ok.	No staining or corrosion on any of the test metals.
Cleaner C	No staining or corrosion on any of the test metals.	No staining or corrosion on any of the test metals.
After 42 Hour Immersion		
Cleaner A	No Change	No Change
Cleaner B	No Change	No Change
Cleaner C	Slight staining of brass	No Change

No attempt was made to set limits to pass or fail the cleaners. Solvent phase corrosion data is more indicative of situations encountered in the field. Data obtained on solvent phase tests should be given more consideration than water phase data for the establish-

ment of standards or for comparative test purposes.

Cleaner B appears to be the poorest in terms of corrosion in the solvent phase. Cleaner C is poorest in the water phase on copper and brass. Often engine parts may pro-

(Turn to Page 136)

Table VI. Weight Loss MG/CM², 42 Hour Immersion. Partial Water Phase

	Steel	Cast Iron	Aluminum	Copper	Brass	Zinc
Cleaner A	0.0	0.0	0.12	0.0	0.14	0.0
Cleaner B	0.0	0.0	0.09	0.14	0.25	..
Cleaner C	0.0	0.0	0.0	0.38	0.49	0.19
Solvent Phase						
Cleaner A	+0.6	0.06	0.08	0.06	0.0	
Cleaner B	+0.06	0.0	0.12	0.21	0.64	
Cleaner C	0.0	0.0	0.09	0.0	0.49	



The author, a perfume chemist, shown in his office studying a perfume creation. Newly equipped laboratory in rear.

Packaging Perfumed Products

THE choice of packaging materials for a fragrance or perfumed product should be governed by three main considerations: is the fragrance retained where it belongs (in the product), does it escape, through the walls of the container, or is it absorbed by the packaging material. Is the fragrance changed by chemical reaction with the package? Are there changes effected by the impermeability of the container?

The odor problems for some packages are recurrent, but fresh ones continually arise because the pressure for new, attractive and less expensive containers as aids to merchandising will not be denied. Each time a new plastic comes along, or a new use for an old material is devised, we suddenly find ourselves

By Christian F. Wight*
van Ameringen-Haebler, Inc.
New York

in correspondence with a whole new set of firms and people. Unfortunately, those industries engaged in developing new packaging materials do not always provide leadership in the investigations required to assure proper application. The burden falls on the user.

There has been a great proliferation of literature on the subject of procedures to gauge the odor picture — Triangular tests, the profile method, hedonic tests. It should be noted that the organoleptic process is basic with all. They depend on the noses of the few, or many, on the panel and are as trustworthy as the individuals involved. They are useful for control or for evaluation of new packages. Such tests assess the final result and

perhaps point out the source of failure, but it takes more specialized information to know when and how to correct an imperfect performance. The nature of our problem is a subtle one usually involving changes in quantities too small to be followed by any analytical method, chemical or instrumental, though methods for non-organoleptic control are constantly sought. The techniques employed so far have not succeeded in measuring the transfer of more than a single known component. Mixtures present ambiguous results, worthless unless correlated to the odor impression of an observer. Considerable effort has been devoted to gain understanding of the elusive behavior of the complex mixtures that make up fragrance when held in various containers, but it is not a reported and established body of

* Paper presented before the fourth annual symposium of the American Society of Perfumers, New York, March 20, 1958.



The perfuming materials industry for many years used foil (top photo) as a protective wrapping for the storage of soap samples. Aluminum foil jackets (bottom photo) are used widely for popular brand toilet soaps today. They are attractive and help prolong the shelf life of the perfume.

the manufacturer to exercise the widest selection.

Rules Change

What seems to be a hard and fast rule can be suddenly and tantalizingly reversed. A traditional use of toilet soap was to have it serve as a sachet in the linen closet; it was a most desirable feature to have the fragrance penetrate the wrapper. A short two years ago foil wrapped soap came in, probably only after much painful deliberation about the lack of surface odor. Now try to find a soap without an aluminum jacket! The use of highly impervious films has an advantage in that many of the more transient perfumery items can be used with the expectancy of good shelf life. The discovery of a durable lining for metal cans is bringing about another kitchen revolution: luring the housewife from the powdered detergent to the liquid. The range of odor available for such packaging can extend to any light fresh type, impossible for powdered products in cardboard cartons because no evaporation loss occurs.

Some of the new packaging materials have a lot to recommend them. The multilayer sandwich films of paper, foil and polyethylene are a good illustration of engineering that provides a positive metal barrier plus excellent chemical isolation.

The aerosol package also furnishes complete protection from two, and often three, of the scourges of aromatic materials: light, oxygen and tendency to evaporate.

On the minus side, tight packages allow malodors, where they exist, to build up in the free air space. In some instances it may be essential or desirable to have a partially permeable package which can breathe in order to release these unpleasant light bodies, existing or developed in the base.

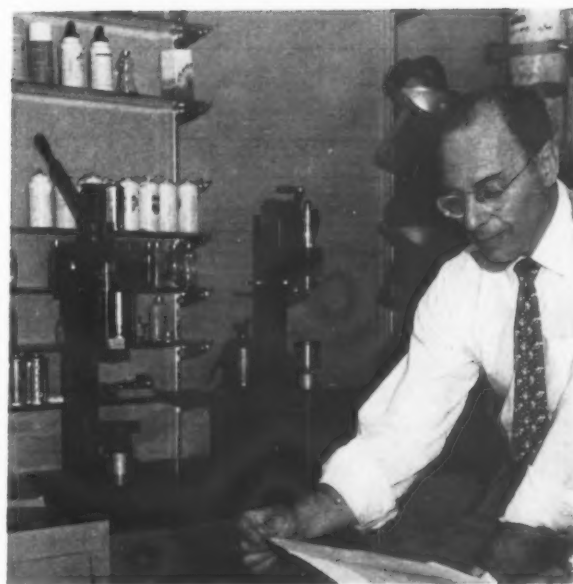
fact, rather it is a fund of knowledge residing in the experience of professional perfumers. For the very reason that there are so many combinations of odor-media-package the perfumers tend to approach problems individually and separately. Occasionally, as with the ubiquitous polyethylene, it is attacked in terms of single raw materials. The practical aim of research along these lines is to develop odors suitable for specific containers. It is definitely worthwhile when a new packaging idea comes along that odor specialists be consulted

for either modification of the fragrance or for advice on package alteration to hold the odor better. The choice of raw materials which will give good performance can be exceedingly restricted for some packages and one should never overlook the chance that a different container may be the answer. Additional packaging costs can be more than compensated for by the elimination of perfume loss and by improved shelf life; even more important is that better packages broaden the range of odor types available for the product, allowing

Every aspect of a package should be studied as a possible source of off-odor. Nothing should be taken for granted. A rubber gasket in an aerosol container may contribute a disagreeable mercaptan note; residual solvent odor from the ink or the varnish on a label, glue, the liner of a cap, the smallest items must be scrutinized as potential trouble makers. A product in a clear glass bottle is subject to the influence of light, for some perfumery items discolor while others may more speedily oxidize or resinify.

The container may be considered from two angles, the chemical and the physical. The first category, chemical, causes us comparatively little trouble. Perfume is only a fraction constituent in most cosmetic articles, so naturally, the main effort is to see that the base product and package are happily coupled. The aromatics, dissolved, dispersed or emulsified and greatly diluted, do not have much opportunity to react with, or be acted upon by the container. We are all familiar with the rapid pitting and accompanying unsightly flocculation of aluminum by alcoholic solutions. This type of reaction can go on between aromatic chemicals and

Perfume requirements and formula adjustments needed for various types of aerosol containers are studied by the author.



aluminum, too. Then there are the assorted color reactions of salicylates, benzoates and phenols when in contact with iron. Finally, copper, alone or alloyed, is easily picked up by certain chemicals and is potentially dangerous for it is a potent oxidation catalyst.

The second part, the physical aspect, has to do with the barrier characteristics of the article. We find ourselves much more involved with paper and plastic packages than with the impervious contain-

ers of metal and glass. Loss by evaporation is the single largest factor with these permeable materials. The mechanism may be solution—migration—evaporation, may be gaseous diffusion, or may be simple evaporation through cracks, folds, pinholes, or seals where the package is not made to give hermetic protection. Let's get one thing straight; the nature of perfume materials is to volatilize and a goodly number of them do so in a measurably short time. One must not become bemused with thoughts of those ancient tombs containing aromatic burial resins that have persisted for 30 centuries. Ninety-five per cent of our working aromatics don't last even thirty days. Odor loss or change sometimes can be improved by adjustment of the proportion of the ingredients or by choosing more persistent ones. Sometimes the only recourse is to pick a completely different fragrance. The most famous recent example of improper fragrance selection was a nationally sold product which lost half of its perfume before it left the factory and the other half before it was sold by the retailer. We perfumers like to discourage such practices.

Another phenomenon not susceptible to correction by adjustment of the perfume oil, is adsorption and retention of odor by paper,

Infrared absorption spectra being used to determine the loss of aromatic materials through polyethylene.

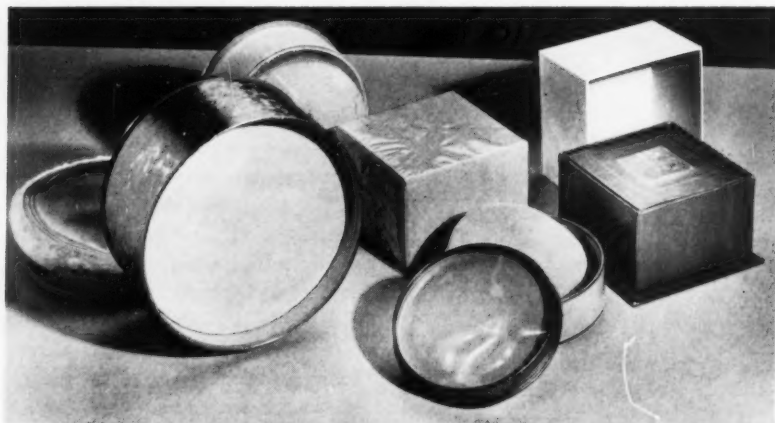


cardboard and polyethylene. To compensate for such loss the usual practice is to increase the level of perfume in the product.

Transparent containers of glass or plastic are frequently employed for clear solutions and the responsibility for permanent brilliance is shared by the perfumer. Some articles, such as brilliantine, don't lend themselves to filtering. Other items with low alcohol content, such as after shaving lotions, cannot tolerate high percentages of certain resins, terpenes or crystalline aromatics. All aerosols must be free of precipitates which might clog the valves, while clear glass aerosols demand good immediate clarity because of the difficulty of holding the highly volatile propellant-product mixture for any extended period before filtering. In these areas the perfumer can often prevent, or circumvent this phase by suitable changes in the composition of his fragrance.

The fact that permeation is a two-way street must not be overlooked. The passage of oxygen or moisture through a container wall can create detrimental effects just as surely as direct contamination because of the proximity of an odorous foreign product. An alert manufacturer anticipates such possibilities and takes appropriate action. He achieves the desired results by means of a liner of glassine, polyethylene or foil, or adopts a laminated foil-plastic film, or he uses a waterproofed cellophane.

Cardboard containers require specially designed odors as well as protective coverings such as cellophane or foil.



Many perfumery materials are excellent solvents for waxes, resins and plastics and can, and do soften the coatings, linings and printing on packages.

Food products often have an advantage over cosmetics in that they have their aroma locked up in the plant cell, either mechanically or as glucosides, whereas the odor in cosmetics is almost invariably the result of the addition of fluid aromatics to the preparation and no mechanical occlusion is possible—with this exception: There is a growing interest in adaptation of the artificially sealed in odor granules which can serve as a package in miniature, reducing the evaporation of highly volatile ingredients and isolating sensitive aromatics from their environment.

In the plastics field, polyethylene is still king for cosmetic containers and continues to expand, and today is invading the film field held by cellophane and "Saran." New polyethylenes are coming with reduced permeability—a development of great interest to perfumers.

It can be seen that these are not especially complicated problems, nor are the solutions difficult. All that is needed is an appreciation of the points where trouble can arise. Sometimes there is such a preoccupation with the decorative aspects that it is forgotten that a container is still essentially a vehicle to get a product into the consumers' hands.

Finally, I *plead* that the perfumer be invited to participate in the deliberations leading up to the packaging of a new item. Surely no manufacturer can afford to pass by any assistance that will give his product the greatest chance for success in the market place.

—★—

TGA Cosmetics Tax List

The Toilet Goods Association, 1270 Sixth Ave., New York 20, has published a recent ruling of the Internal Revenue Service, listing toilet preparations which are taxable and non-taxable. The ruling states in part that a tax will be applied by the retailer to "any article advertised or held out for toilet purposes, or for any purpose for which the articles enumerated in the law are customarily used, regardless of the name by which it may be known or distinguished. That any one product, preparation or substance coming within the scope of the law may have, or be held out to have, a medicinal, stimulating, remedial, or curative value does not exempt it from the tax, if it is used as an adjunct to the toilet or for toilet purposes.

"The tax on toilet preparations shall not apply to articles intended for use in the care of babies. However, an article which is represented by advertising or labeling as fit for adult use, in addition to the use in care of babies, will not be exempt from the tax."

A partial list of the taxable and non-taxable products follows:

Taxable: bubble bath preparations; deodorants for use in closets, bureau drawers, etc.; hair sprays; hand creams; hand lotions; shampoos containing five per cent or less of saponaceous matter; shampoos, if advertised to change the natural appearance of the hair; shaving preparations, if advertised for use as a skin conditioner; preparations for removing stains from the skin, unless the product contains more than five per cent saponaceous matter; and perfumed water softeners.

Non-taxable: shampoos containing more than five per cent saponaceous matter and which are recommended only for cleansing purposes; shampoos for use on pets; shaving creams for use only as a beard softener, soaps in cake, powder or liquid forms; sponges and toothpastes and tooth powders.



Dutch household wash powders products of De Haas & van Brero, Ltd., Apeldoorn, Holland. Packages bear premium stamps, to which firm largely owes its market success.

"1-2-3" is soap base perborate powder, "Snel" a light duty, "Swift" a heavy duty syndet.

Dutch Soap Stamps Spur Sales

HOW a Dutch soap and detergent firm promotes its products through its own system of premium stamps was explained in a recent interview when two executives of the company visited the offices of *Soap & Chemical Specialties* last month.

The firm is De Haas & van Brero, Ltd., Apeldoorn, Holland, a 60-year-old organization that started with three employees and today has a payroll of 250. The fourth largest soap and detergent company in the Netherlands, it holds its own against some of Europe's real giants in the cleaning materials field.

The two executives of De Haas & van Brero, who arrived in the United States April 13 for a month's visit to study marketing methods and techniques of the American soap industry, are L. H. van Schelt, general manager, and

J. W. N. Lau, assistant manager. They intended to visit middle-sized soap and detergent marketers in New York, Chicago, Cleveland, and Washington.

De Haas & van Brero accounts for approximately 15 per cent of the entire turnover of the Dutch soap and detergent industry, which amounted to 120 million guilders in 1957. (\$1.00 equals fl 3.80) This market is divided between four larger companies and a number of small ones. The four main competitors are two giants: Lever Brothers Ltd. and "Persil" Ltd. (Henkel) and two fair sized Dutch firms: Royal Dobbelman Ltd. and De Haas & van Brero, Ltd. The 11 million Dutch consumers use approximately 40 per cent synthetic detergents and 60 per cent soap based products.

De Haas & van Brero makes

or compounds six main products: "1-2-3" perborate wash powder, which is a soap based product; "Swift" a synthetic heavy duty powder; "Snel" synthetic light duty powder; "Reinal," a scouring powder; "Condor" household soap bar; and "Carlton de Luxe" toilet soap. A "super light" duty synthetic detergent powder will shortly be added to this line under the brand name "Deb." In addition to its own brands the firm does some custom manufacturing and packaging.

Packages appear pocket-sized compared with those on the American retail market. The perborate powder comes in 250 gram, the heavy syndet in 150 gram, and the light duty syndet in 60 gram units.

Dutch soapers compete just as keenly as American or any other soap manufacturers, according to Mr. Van Schelt. To secure its posi-

tion among pretty formidable competitors De Haas & van Brero uses an ingenious premium system. This promotion scheme is such an important facet of the firm's operation that it employs 45 of the firm's 250 employees. Unlike current American premium systems, this "savings-card" plan is entirely administered by the manufacturer.

Every product carries a savings stamp valued at 10 points. The stamp is either on the outer wrapper, or printed on the carton or canister. The housewife cuts and collects these stamps and sticks them on savings cards printed by the company. In exchange for a certain

number of stamps she can order, free of charge, various household linens or receive a cash bonus instead. Filled cards are returned to and processed by De Haas & van Brero at the rate of 2,000 a day. The blank cards are distributed by retailers, by the mail order house which ships the linens to the customers, and occasionally on a house to house basis. They can also be obtained by writing to De Haas & van Brero.

This premium scheme serves not only the consumer but also the retailer and the salesmen of the wholesaler handling the firm's products. Each case of merchandise con-

tains one or two retailer coupons, each worth fifty points. Every retailer coupon carries a stub which is a "surprise" ticket for the wholesale representative.

According to De Haas & van Brero the premium system has been instrumental in securing 15 per cent of the total consumer market. In addition it is helping the firm not only to hold its own but also to expand, however, slightly, in the face of a general leveling off.

Persil Ltd., which is the Dutch arm of the German Henkel Persil Werke, also uses a premium plan. However, this plan is confined to clubs, institutions, etc.

Soaps and Syndets Course July 14-18

PROGRAM arrangements for the 1958 short course on soaps and synthetic detergents, to be given under the auspices of the American Oil Chemists' Society, were announced recently by Foster D. Snell, of Foster D. Snell, Inc., New York, program chairman. The course will be presented at the Princeton Inn, Princeton, N. J., July 14-18.

One of the highlights of the program will be tours of nearby industrial plants scheduled for the first four afternoons of the meeting. Plants to be visited include the Edgewater, N. J., unit of Lever Brothers Co., New York; the Port Ivory, Staten Island, N. Y., plant of Procter & Gamble Co., Cincinnati, and the Eastern Regional Research Laboratory of the U. S. Depart-

ment of Agriculture in Philadelphia; and the Lyndhurst, N. J. plant of General Aniline & Film Corp., New York. The tours are being arranged by John W. McCutcheon, New York consulting chemist. Mr. McCutcheon is a regular contributor to *Soap and Chemical Specialties*.

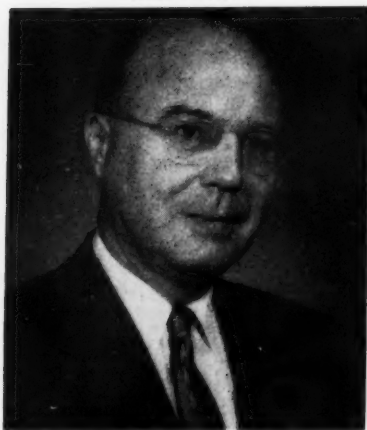
W. A. Peterson of Colgate-Palmolive Co., New York, will serve as chairman of the opening day's program, which will feature papers on "Alkylate," by George Feighner, Continental Oil Co., Ponca City, Okla.; "Sulfonation and Sulfation—Theoretical Aspects," by J. E. Woodbridge, Atlantic Refining Co., Philadelphia; and "Sulfonation and Sulfation—Practical Aspects," by J. W. Lohr,

Andrew Jergens Co., Cincinnati. Dinner speaker on July 14 will be Roy W. Peet, manager and secretary of the Association of American Soap and Glycerine Producers, Inc., who will talk on "The Changing Scenes of Syndets and Soaps."

On July 15, with S. D. Gershon of Lever Brothers Co., Edgewater, N. J., serving as chairman, discussions will include "Ethylene Oxide Condensation," by R. D. Fine, Atlas Powder Co., Wilmington, Del.; "Amine Condensates," by H. L. Sanders, Stepan Chemical Co., Chicago; "Builders and Other Adjuncts of Syndets," by J. R. Van Wazer, Monsanto Chemical Co., Dayton, O.; and "Fluorescers," by F. Villuane, American Cyanamid Co., Bound

(Turn to Page 129)

W. A. Peterson



Foster D. Snell



Roy W. Peet



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and now QUESTEX, a purified high assay E.D.T.A. chelant.

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DSP
TSP
TSPP
SAPP
DRI-TRI (TSP ANHY.)
ARMOFOS (TRI-POLY)
VITRAFOS (GLASSY)
CHLORINATED TSP

POTASSIUM PHOSPHATES
PHOSPHORIC ACIDS
SODIUM CARBONATE
SODIUM HYPOSULFITE
ANHYDROUS HYPO
SODIUM SULFITE
ACETIC ACID
QUESTEX (EDTA)



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Division of Victor Chemical Works
General Offices: South Gate, California
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Turn Page for Phosfacts-Ortho





Ortho

NUMBER 1 IN A SERIES



Which \wedge Phosphate to Use?

While the chemical action of all orthophosphates on metal hardness ions dissolved in water is basically the same, specific properties are contingent on the phosphoric acid-alkali ratio. The following comments may be helpful in selecting which phosphate will best serve your purpose.

MONOSODIUM PHOSPHATE, ANHYDROUS (NaH_2PO_4)

This acid salt reduces the alkalinity of water that has been through a lime-soda treatment and contributes P_2O_5 which if maintained in the proper proportion prevents scale formation by (scale forming) impurities not removed by the softener. Ferrous metals, aluminum, brass and copper are effectively cleansed of oil, grease and dirt with MSP. Iron and aluminum are cleaned even without the aid of wetting agents by the formation of hydrogen gas at the metal surface which literally lifts off the contaminant. The light etching of ferrous metals by a solution of monosodium phosphate and water removes rust and provides a temporary iron-phosphate coating which resists corrosion and insures a superior bond when paint is applied. In addition to wide application in pH control, monosodium phosphate is an accepted and proven source of phosphorus in stock feed supplements where more calcium is not needed.

DI-SODIUM PHOSPHATE, ANHYDROUS (Na_2HPO_4)

Since the pH of neutral solutions is not greatly affected by the addition of disodium phosphate, it is frequently added to boiler water to remove calcium and magnesium salts as non-scale-forming solids. The higher pH value of disodium phosphate makes it less corrosive than MSP. The smooth texture of some process type cheese results from the emulsifying action of DSP. Evaporated milk is made stable by the buffering action of this orthophosphate. Instant puddings are improved by the swelling of milk proteins, and disodium improves appearance and tenderness of processed meat. Generally, this phosphate is indicated where a high strength, mildly alkaline phosphate is required.

TRISODIUM PHOSPHATE, CRYSTALLINE $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$

The most alkaline of the orthophosphates, TSP is mild in comparison to

other alkalies recommended for such heavy duty cleaning purposes as degreasing, paint cleaners and industrial cleaning compounds. More effective than strong alkalies in many cases TSP combines good water softening power with unusual emulsifying and saponifying ability to make it about the best single product available for general purpose and heavy duty cleaning. TSP is one of the most outstanding casein solvents known and is especially valuable as a dairy cleanser and in the manufacture of casein glues. Widely used in soap and scouring powders, this popular phosphate affords an efficient and economical cleansing action with little corrosive effect except on aluminum and zinc. The addition of sodium silicate inhibits corrosion on these metals.

DRI-TRI (TRISODIUM PHOSPHATE, ANHYDROUS) Na_3PO_4

Comparable to regular TSP, DRI-TRI offers advantages, especially to the consumer in lower cost per unit of active material and lower freight. Three pounds of DRI-TRI is equivalent to seven pounds of crystal TSP. Excellent compatibility with other anhydrous salts and lack of free caustic make DRI-TRI desirable in certain instances. The tendency to peptize hardness ions usually flocculated by crystal TSP indicates improved detergency when DRI-TRI is incorporated into a cleaning compound.

CHLORINATED TRISODIUM PHOSPHATE

$4(\text{Na}_3\text{PO}_4 \cdot 11\text{H}_2\text{O}) \cdot \text{NaOCl}$

The qualities of other forms of trisodium phosphate are also found in chlorinated TSP. However, in addition to the excellent softening and cleaning value of the regular material, chlorinated TSP is a good deodorant, a powerful sanitizer and has extra cleansing ability. Stain removal and better rinsing properties make chlorinated TSP a valuable addition to a wide variety of cleaning compounds.

PROPERTIES OF SODIUM ORTHOPHOSPHATES (TYPICAL VALUES)

	MONOSODIUM PHOSPHATE NaH_2PO_4	DISODIUM PHOSPHATE Na_2HPO_4	TRISODIUM PHOSPHATE $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$	DRI-TRI (ANHYDROUS TSP) Na_3PO_4	CHLORINATED TRI- SODIUM PHOSPHATE $4(\text{Na}_3\text{PO}_4 \cdot 11\text{H}_2\text{O}) \cdot \text{NaOCl}$
Mol. Wgt.	120.0	142.0	380.2	164.0	1,522.5
Typical Assay	99.5%	98.0%	100.7%	—	3.5% Av. Chlorine
Physical Form	Fine Granular	Fine Flake	Crystal, Fine cry.	Powd.-Gran.	Fine Crystal
Phos. Anhy. (P_2O_5)	58.8	49.0	18.8	42.5	18.3
Solubility Range Lbs./Gal. of added Water 20-100°C	6.0 to 19.3	0.53 to 8.6	2.5 to 00	0.9 to 7.2	Freely Soluble
pH of 1% sol'n. (Room Temp.)	4.5	8.9	11.6	11.5	11.5
Grades	Food Proc. Technical	Food Proc. Technical	Food Proc. Technical	Food Proc. Technical	Technical

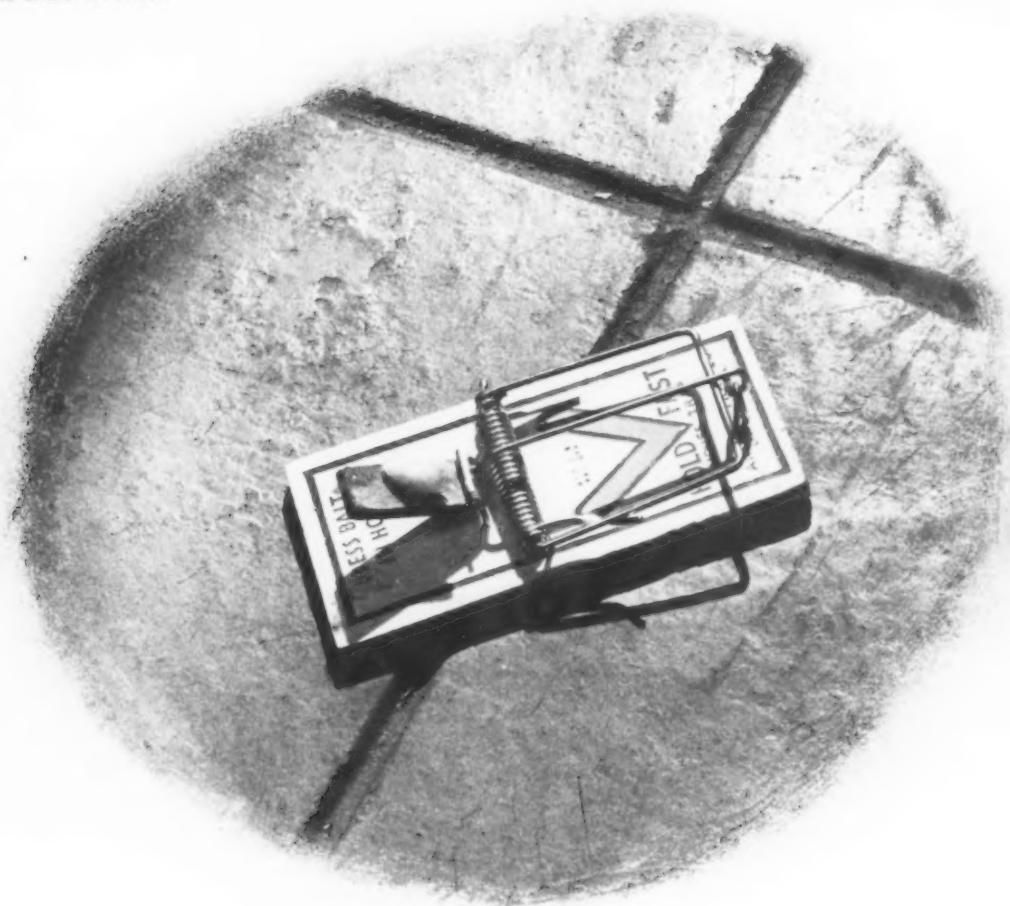
The chemical action of orthophosphate on many soluble metal ions precipitates a sludge or a mixture of insoluble phosphates. Where such precipitates are undesirable, the use of polyphosphates is indicated. Be sure to see No. 2 of this series or write today for "Phosfacts-Poly."



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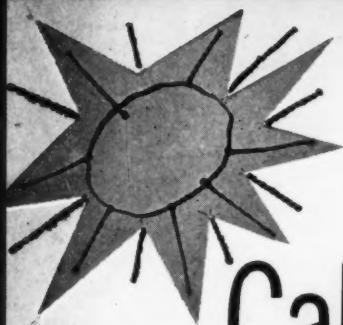
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	Hue of White on Fabric	Substantivity
Calcofluor White 5B Conc.	slightly greenish blue	cotton, viscose
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Calcofluor White MR New	slightly reddish blue	cotton, viscose
Calcofluor White M2R New	slightly reddish blue	cotton, viscose
Calcofluor AHF Conc.	neutral to slightly greenish blue	cotton, rayon, silk
Calcofluor White SD	slightly reddish blue	nylon, acetate, wool, Arnel, silk
Calcofluor White LD	slightly reddish blue	nylon, acetate, wool, Arnel, silk

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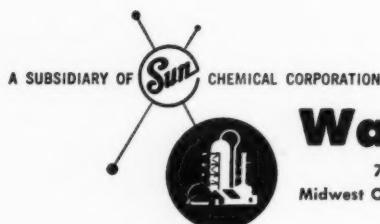
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Cardis Polymer #10	212-216	0-1	1-1½	8-10	25-30	Polymer
Cardis Polymer #8	205-210	1-2	3-5	7-10	24-28	Polymer
Cardis One†	195-200	1-2	4-5	12-16	55-65	Emulsifiable Petroleum Wax
Cardis 314®	184-189	4-6	4-5	13-16	45-55	Emulsifiable Petroleum Wax
Cardis 319®	180-185	5-7	4-6	18-20	65-70	Emulsifiable Petroleum Wax
Cardis 320®	180-185	5-7	4-5	28-30	75-80	Emulsifiable Petroleum Wax
Cardis 262®	195-200	3-5	Brown	14-17	40-45	Specially Processed Petroleum Wax
Polymekon®	195 MIN.	0-3	Yellow	0-0	0-0	Specially Processed Petroleum Wax
Fortex®	190-200	3-5	2½-3½	0-0	0-0	Microcrystalline Hard & Brittle
Mekon® B-20	190-195	3-5	Brown-Black	0-0	0-0	Microcrystalline Hard & Brittle
Mekon® A-20	190-195	3-5	Amber-6 Max.	0-0	0-0	Microcrystalline Hard & Brittle
Mekon® Y-20	190-195	3-5	Yellow-3-3½	0-0	0-0	Microcrystalline Hard & Brittle
Warco® Wax #5	158-160	9-10	Ivory	—	—	Specially Processed Petroleum Wax
Warco® Wax 180 White	180-185	4-7	White	0-0	0-0	Microcrystalline Hard & Brittle
Warco® Wax 180 Brown	180-185	4-7	Brown	0-0	0-0	Microcrystalline Hard & Brittle
Warco® Wax 170-A Yellow	170-175	10-15	Yellow 1-2	0-0	0-0	Microcrystalline Plastic
Warco® Wax 170-A Brown	170-175	10-15	Brown	0-0	0-0	Microcrystalline Plastic
Warco® Wax 150-A Yellow	145-155	15-20	Yellow 1-2	0-0	0-0	Microcrystalline Plastic
Warco® Wax 150-A Brown	145-155	15-20	Brown	0-0	0-0	Microcrystalline Plastic
Warcosine®	150-155	15-20	White	0-0	0-0	Microcrystalline Plastic
Paraffin	136-138	FULLY REFINED				Crystalline
Cane Wax 500	171-176	3 Max.	Light Brown	25-35	55-70	Vegetable Wax
Cane Wax 517-711	171-173	2 Max.	Black	—	—	Vegetable Wax
Cane Wax 700	169-174	1.0-1.5	Light Brown	25-30	70-90	Vegetable Wax

† Pat. No. 2,471,102

* Patent Applied For.



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rats and mice
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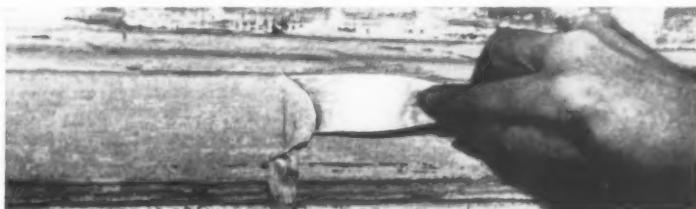
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Weather-beaten paint is removed from wood safely, quickly and easily, with a fast-acting, nonflammable methylene chloride-based paint remover.

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E. I. du Pont de Nemours & Co. (Inc.)

SC-5

Electrochemicals Department • Wilmington 98, Delaware

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MGK R-11 is an excellent repellent for house flies, gnats, horn flies, etc. In cattle sprays it will build up a residual repellency effective for 72 hours, resulting in better milk production from dairy cows and greater weight gains from beef cattle. Approved for use on dairy cattle by the U.S. Food & Drug Administration and U.S. Department of Agriculture.

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CSMA's 44th Midyear Meeting

Large registration expected for meeting May 20-21 in Cincinnati. Surveys awaited.

THE results of product surveys for 1957, including a new one covering synthetic detergents, are among the highlights of the program for the 44th annual midyear meeting of the Chemical Specialties Manufacturers Assn., being held at the Netherland Hilton Hotel, Cincinnati, May 20-21. In addition to technical papers dealing with products and raw materials of the chemical specialties industry, there will be a talk on "Budgeting for Research" by N. B. Tucker, director, research division, Research and Development Department, Procter & Gamble Co., Cincinnati. Dr. Tucker speaks at the group luncheon on Tuesday, May 20, the first day of the meeting.

Meanwhile, on Wednesday, May 21, CSMA will hear a post luncheon address by Louis Ware, president of International Minerals & Chemical Corp., Chicago, on "Minerals and Chemicals."

A turn-out of between 800 and 900, possibly the largest for a midyear meeting in the history of the association, has been predicted by H. W. Hamilton, secretary. This

in spite of a business recession which has forced some companies to indicate in advance that they will send fewer representatives to the meeting than in previous years.

Against a background of a full program of formal discussion in meetings of the six divisions of which CSMA is composed, informal discussion is expected to deal largely with business conditions in 1958, past and present.

Precautionary labeling is another subject that is expected to come up for discussion both in and out of meeting rooms. In a year which has two precautionary labeling bills up for consideration in the U. S. House of Representatives and one in the U. S. Senate, as well as a number of state and local ordinances in various stages of development, the subject is uppermost in the minds of many chemical specialties makers and marketers. Fresh from a precautionary labeling conference sponsored by the Manufacturing Chemists' Association, in Houston, Tex., April 30, where the topic was given one-full day's airing, specialties

manufacturers are also pondering a new sanitary code being prepared by the City of New York and a model bill introduced last month by the publicity minded American Medical Association.

A round-up type of report on the current status of some of these precautionary labeling developments is expected to be presented by CSMA general counsel, John D. Conner, in his report at the general session the morning of May 21.

The aerosol and pressurized products survey, the sixth annual household and industrial insecticide survey, the 1957 waxes and floor finishes industrial production survey and three surveys of automotive specialties products groups are among the important features scheduled for the meeting.

Four separate but concurrent divisional sessions opened the formal part of the convention on Tuesday morning, May 20. The previous day, Monday, May 19, was devoted entirely to association business, including meetings of the board of governors and of tech-

James E. Ferris
President



Donald M. King
First Vice-President



H. W. Hamilton
Secretary



Program for the 44th Midyear Meeting Chemical Specialties Manufacturers Association, Netherland-Hilton Hotel, Cincinnati, Tues. & Wed., May 20-21

Tuesday Morning, May 20 Automotive Division—North Hall

A. James Coulter, presiding

9:00 a.m.

- Au-1 Address of the division chairman, A. James Coulter, Gulf Oil Corp., Pittsburgh, Pa.
- Au-2 Report of nominating committee, Joseph D. Ryan, Olin Mathieson Chemical Corp., Baltimore, chairman
Election of administrative committee for 1959
- Au-3 Symposium—"Marketing Automotive Chemicals—How?," moderator Myron A. Frank, Dow Chemical Co., Midland, Mich. Panelists: (Au-3a) Thomas J. Freda, R. M. Hollingshead Corp., Camden, N. J.; (Au-3b) Peter M. Madeira, Gray & Rogers, Philadelphia; (Au-3c) Richard L. Webber, Automotive News, Detroit, Mich.; (Au-3d) John O'Dea, Shell Oil Co., New York; (Au-3e) Charles M. Krueppel, Sears Roebuck & Co., Chicago.

Disinfectants and Sanitizers Division— Parlors N and O

Irving Gaines, Presiding

9:00 a.m.

- D-1 Address of division chairman, Irving Gaines, Onyx Oil & Chemical Co., Jersey City, N. J.
- D-2 Report of nominating committee, R. F. Prindle, Lehn & Fink Products Corp., Bloomfield, N. J., chairman
Election of Administrative Committee for 1959
- D-3 "Organo Chlorine Compounds," by E. M. Petrie, Monsanto Chemical Co., St. Louis
- D-4 "An Adaptation of Phenol Coefficient Test Procedure to Microbacterium Tuberculosis," by Eleanor Wright, Lehn & Fink Products Corp., Bloomfield, N. J.
- D-4 "Performance Evaluation of Quaternaries by the Chambers Method," by L. S. Stuart, L. F. Ortenzio, and J. L. Friedl, U. S. Department of Agriculture, Plant Pest Control Division, Washington, D. C. Delivered by L. S. Stuart.
- D-5 "Chlorine Dioxide," by T. P. McNicholas, Esmond Laboratories, Division of General Products Co., Esmond, R. I.

Insecticide Division—Pavillion Caprice

John A. Rodda, presiding

9:00 a.m.

- I-1 Address of division chairman, John A. Rodda, Fairfield Chemical Division, Food Machinery & Chemical Corp., New York.
- I-2 Report of nominating committee chairman, Carlos Kampmeier, Rohm & Haas Co., Philadelphia.
Election of division administrative committee for 1959
- I-3 "Rodenticides—Today, Tomorrow—Forever," by Karl Paul Link, department of biochemistry, University of Wisconsin, Madison.
- I-4 "Confine Insecticide Hazards to Insects," by Mitchell R. Zavon, M.D., Kettering Laboratory, University of Cincinnati.
- I-5 "Sixth Annual Household and Industrial Insecticide Survey," by George W. Fiero, Esso Standard Oil Co., New York.

Waxes and Floor Finishes Division— South Hall

C. S. Kimball, presiding

9:00 a.m.

- W-1 Address of division chairman, C. S. Kimball, Foster D. Snell, Inc., New York.
- W-2 Report of nominating committee, H. J. Mellan, Durez Plastics Division, Hooker Electrochemical Co., North Tonawanda, N. Y., chairman.
Election of division administrative committee for 1959
- W-3 "Control Testing and Specifications of Polymers Used in Floor Coatings," by Richard H. Cahill and Roland M. Avery, Jr., UBS Chemical Corp., Cambridge, Mass. Delivered by Richard H. Cahill.
- W-4 "Film Forming Characteristics of Polymer Emulsions," by George L. Brown and Richard E. Zdanowski, Rohm & Haas Co., Philadelphia. Delivered by R. E. Zdanowski.
- W-5 "The Indiana Household Poison Registration Act," by Robert A. Tucker, chief, Registration and Licensing Section, Division of Food and Drugs, Indiana State Board of Health, Indianapolis.
- W-6 "Non-Ionic Self-polishing Wax Emulsions," by Kurt J. Wasserman, Wax & Rosin Products, Inc., New York.
- W-7 Report of the scientific committee, by Donald Whyte, S. C. Johnson & Son, Inc., Racine, Wis.
- W-8 1957 Waxes and Floor Finishes-Industrial Production Survey Tuesday Afternoon, May 20
Hall of Mirrors
12:30 p.m. Luncheon
J. E. Ferris, presiding.

"Budgeting for Research," by N. B. Tucker, director, research division Research and Development Dept. of Procter & Gamble Co., Cincinnati
Business meeting: action on amendments to constitution and by-laws; announcements; appointment of nominating committee

Aerosol Division—Pavillion Caprice

W. Earl Graham, presiding

2:00 p.m.

- A-1 Address of division chairman, W. Earl Graham, Clayton Corp., St. Louis, Mo.
- A-2 Report of nominating committee, Charles E. Beach, John C. Stallfort & Sons, Baltimore, chairman
Election of division administrative committee for 1959
- A-3 "Aerosol and Pressurized Products Survey," by Frederick G. Lodes, Lodes Aerosol Consultants, Inc., New York
- A-4 "Complete First Year Program Report—Aerosol Publicity," by Norman Odell, G. M. Basford Co., New York.
- A-5 "The Use of Diethyl Toluamide Insect Repellent in Aerosols," by Henry F. Pierce, Hercules Powder Co., Wilmington.
- A-6 "The Use of Chlorothene in Personal Product Aerosols," by A. E. Schober, Dow Chemical Co., Midland, Mich.
- A-7 "Economics of Retailing Aerosol Products," by Eugene Leshner, Boyle-Midway Division, American Home Products Corp., New York.
- A-8 "Microbiological Aspects of Pressurized Foods," by G. L. Hayes and D. W. Riester, American Can Co., Maywood, Ill. Delivered by G. L. Hayes.

Soap, Detergents and Sanitary Chemical Products Division—North Hall

Clarence L. Weirich, presiding

2:00 p.m.

- S-1 Address of division chairman, Clarence L. Weirich, C. B. Dolge Co., Westport, Conn.
- S-2 Report of nominating committee, Melvin Fuld, Fuld Brothers, Inc., Baltimore, chairman
Election of division administrative committee for 1959
- S-3 Symposium "Nitrogen Containing Surfactants." Moderator, Herbert L. Sanders, Stepan Chemical Co., Chicago. Panelists and their subjects include:
- S-3a "Fatty Alkanol Amides," by T. M. Kritchevsky, Stepan Chemical Co.
- S-3b "Sulfonated Amides," by James Cloney, General Aniline & Film Corp., New York
- S-3c "Protein Base Surfactants," by Albert J. Turner, Maywood Chemical Co., Maywood, N. J.
- S-3d "Amphoterics," by W. Mannheim, Miranol Chemical Co., Irvington, N. J.
- S-4 "Nitrogen Containing Cationic Surfactants," by Paul L. Du Brow, Armour & Co., Chicago
- S-5 1957 New Detergent Survey

Motion Picture Program—Parlors L and M

- 2:15 p.m. "Machines with Aerosol Know-How," Mojonner Associates, Inc., Chicago
- "Of Men and Molecules," B. F. Goodrich Chemical Co.
- "Essential Oils of Africa," Fritzsche Brothers, Inc.
- Selected commercials from major TV presentations such as "Du Pont Show of the Month" and others.

Tuesday Evening, May 20

5:30 to 9:00 p.m. Open house

Wednesday Morning, May 21 General Session—Pavillion Caprice

Donald M. King, Masury-Young Co., Boston, First Vice President, CSMA, presiding

10:00 a.m.

- G-4 Report of secretary, by H. W. Hamilton, Chemical Specialties Manufacturers Association, New York.
- G-5 Report of treasurer, by P. C. Reilly, Reuay Tar & Chemical Corp., Indianapolis
- G-6 Address of president, by James E. Ferris, Hooker Electrochemical Co., Niagara Falls, N. Y.
- G-7 Report of Association Counsel, by John D. Conner, Cummings, Sellers, Reeves, Conner and Kendall, Washington, D. C.
- G-8 "Current Events in Business," by R. B. Robertson, Jr., president of Champion Paper and Fibre Co., Hamilton, O.
- G-9 "The Year 1958," by D. W. Michener, Chase Manhattan Bank, New York
- G-10 Awarding of door prizes

Wednesday Afternoon, May 21

12:30 p.m. Luncheon

George W. Fiero, Esso Standard Oil Co., New York, Second Vice-President, CSMA, presiding

Speaker: Louis Ware, president, International Minerals & Chemical Corp., Chicago. Topic: "Minerals and Chemicals"

Joint Session: Aerosol and Insecticide Divisions—Pavillion Caprice

W. E. Baulieu, Bridgeport Brass Co., Bridgeport, and Alfred Weed, Olin Mathieson Chemical Corp., Baltimore, presiding

2:30 p.m.

- A-1-2 "Instrumentation for the Aerosol Industry," by William B. Leighton, Union Carbide Chemicals Co., New York
- A-1-2a "The Past, Present and Future of Labeling Pressurized Containers and Insecticides," by Robert L. Ackerly, Cummings, Sellers, Reeves, Conner & Kendall, Washington, D. C.

A-1-2b "Sprayers Can Help Your Insecticide Business," by Philip L. Hauser, National Steelwares Division, Root-Lowell Manufacturing Co., Chicago

A-1-2c "Do People Read Labels of Household Insecticides?" by A. C. Miller, Arnold Mallis, and W. C. Easterlin, Gulf Research and Development Co., Pittsburgh

Soap, Detergents and Sanitary Chemical Products Division—Parlors L and M

W. S. Jessop, U. S. Sanitary Specialties Corp., Chicago, presiding

- S-a "Large Scale Recovery and Uses of a Lanolin-Type Material from Tall Oil," by M. G. Bestul, I. A. Stine, and J. C. McManus, West Virginia Pulp and Paper Co., Charleston, S. C. Delivered by M. G. Bestul
- S-b "Chemical Patents from the Researcher's Point of View," by Neil W. Berst, Diversy Corp., Chicago
- S-c "Micelles—Aggregations of Molecules in Surfactant Solutions," by J. C. Harris, Research and Engineering Division, Monsanto Chemical Co., Dayton, O.
- S-d "Containers for Soaps, Detergents, and Other Cleaning Agents," by E. G. Astolfi, G. E. Curtis, and L. M. Garton, American Can Co., Maywood, Ill. Delivered by George E. Curtis

Waxes and Floor Finishes Division—South Hall

Earl Brenn, Huntington Laboratories, Inc., Huntington, Ind., presiding

2:30 p.m.

- W-8 "Emulsion Polymerization for Floor Polishes," by M. Potash, H. Neidus, and H. Merken, Polyvinyl Chemicals, Inc., Peabody, Mass. Delivered by Max Potash
- W-9 "A Scientific Approach to Understanding and Dealing Effectively with People," by E. W. Ingram, Sales Analysis Institute of New York
- W-10 "Refined Shellac in Self-Polishing Floor Wax Formulations I—Formulation Variables," by Benson G. Brand, J. M. Williams, E. R. Mueller, Battelle Memorial Institute, Columbus, O. Delivered by B. G. Brand
- W-11 Panel on "Current Status of Slip Resistance Measurements," Moderator Bayard S. Johnson, Franklin Research Co., Philadelphia.
- W-11a "The Development of a New Slip Testing Machine—The Slipmeter," by William S. Frederick, Liberty Mutual Research Center, Hopkinton, Mass.
- W-11b "Methods for Determining Coefficient of Friction on Wax Surfaces, Subcommittee IV, ASTM Committee D-21," by Clarence L. Weirich, C. B. Dolge Co., Westport, Conn.
- W-11c "Factors Affecting Results of Coefficient of Friction Measurements," by Bayard S. Johnson, Franklin Research Co.

Automotive Division—North Hall

C. A. Weslager, presiding

2:30 p.m.

- Au-4 Committee Reports
- Au-5 Results of the Antifreeze Survey, by C. E. Allderice, Jr., Bell Co., Chicago
- Au-6 Results of the Brake Fluid Survey, by C. E. Allderice, Jr.
- Au-7 Results of Radiator Products and Polishes Survey, by C. E. Allderice, Jr.

Disinfectants and Sanitizers Division—Parlor O

F. R. Geib, Dow Chemical Co., Midland, Mich., presiding

2:30 p.m.

- D-7 "Iodine and Water Hardness," by Bernard Witlin and Louis Gershenfeld, Philadelphia College of Pharmacy and Science, Philadelphia. Delivered by L. Gershenfeld
- D-8 "Variations in Phenol Coefficient Testing," by L. S. Stuart, L. F. Ortenzio, and J. L. Friedl, U. S. Department of Agriculture, Plant Pest Control Division, Washington, D. C. Delivered by L. S. Stuart
- D-9 "Self-Sanitizing Paint Surfaces," by Paul F. Klens, Nuodex Products Co., division of Heyden-Newport Chemical Corp., Elizabeth, N. J.

Wednesday Evening, May 21

6:00 Reception and cocktail party — Pavillion Caprice
7:30 Banquet and floor show — Hall of Mirrors



Peter C. Reilly
Treasurer



Alfred A. Mulliken
Assistant Secretary



George W. Fiero
Second Vice-President

nical and other committees and subcommittees of CSMA.

Tuesday morning, May 20, the following divisions held simultaneous but separate sessions: Automotive; Disinfectants and Sanitizers; Insecticide; and Waxes and Floor Finishes. The latter two divisions heard the product surveys in their respective fields.

N. B. Tucker, director, research division, Research and Development Department, Procter & Gamble Co., is the featured speaker at the group luncheon, May 20. Dr. Tucker's subject is "Budgeting for Research." Presided over by CSMA president James E. Ferris, Hooker Electrochemical Co., Niagara Falls, N. Y., the luncheon will be followed immediately by a business meeting.

The Aerosol Division and the Soap, Detergents and Sanitary Chemical Products Division will hold separate but simultaneous meetings the afternoon of May 20. The new 1957 detergent survey is slated as the last item on the soap division's program.

Tuesday's events will be concluded by the open house parties in suites of supplier members of CSMA. This is scheduled to begin at 5:30 P.M.

The morning of Wednesday, May 21, will be given over to a general session, at which reports will be presented by the officers and the counsel of the association. James E. Ferris, CSMA president,

will address the meeting. "Current Events in Business" will be reviewed in a talk by R. B. Robertson, Jr., president of Champion Paper and Fibre Co., Hamilton, O. D. W. Michener of Chase Manhattan Bank, New York, will speak on "The Year 1958."

Louis Ware of International Minerals & Chemical Corp., Chicago, will speak at the group luncheon on Wednesday, May 21. On Wednesday afternoon the Aerosol and the Insecticide Divisions will hold a joint meeting. At the same time the following divisions will hold separate meetings: Soap, Detergents and Sanitary Chemical Products; Disinfectants and Sanitizers; Waxes and Floor Finishes; and Automotive. The latter's program will consist of three products surveys: antifreeze, brake fluid, and radiator products and polishes, all to be presented by C. E. Allderdice, Jr., of Bell Co., Chicago.

The meeting will be concluded on Wednesday evening, May 21, with a cocktail party and banquet.

At the mid-year meeting CSMA chooses a nominating committee to select a slate of officers and directors for election at the annual meeting in December in New York City. Each of the association's six divisions elects an administrative committee which includes: chairman, vice-chairman.

The Automotive Division meeting on Tuesday morning, May

20, featured a symposium on "Marketing Automotive Chemicals—How?" The Aerosol Division's program on Tuesday morning included the "Aerosol and Pressurized Products Survey," by Frederick G. Lodes, Lodes Aerosol Consultants, Inc., New York, and "Complete First Year Program Report—Aerosol Publicity," by Norman Odell, G. M. Basford Co., New York.

The joint session of the Aerosol and Insecticide Divisions to be held Wednesday afternoon, May 21, will hear two papers concerned with labeling of aerosol insecticides, a third on instrumentation, and a fourth entitled "Sprayers Can Help Your Insecticide Business."

A panel session on the current status of slip resistance measurements will highlight the Wednesday afternoon meeting of the Waxes and Floor Finishes Division.

— ★ —

High Purity Cetyl Alcohol

American Alcolac Corp., Baltimore, Md., announced last month availability of 99 per cent pure cetyl alcohol which meets or exceeds the standard set by the Toilet Goods Association. Designated "Siponol CC" TGA grade, the material is intended for incorporation in toilet soaps, shampoos, shaving creams, and in a wide range of cosmetic and pharmaceutical specialties.

The "How" of Disinfection

By S. S. Block*

Chemical Engineering Department
University of Florida
Gainesville, Fla.

THESE are days when we are hearing a great deal about basic research. It would appear relevant, therefore, to consider some basic research directed toward understanding how a disinfectant disinfects.

Perhaps it is presumptuous to suggest that we know how a disinfectant works, since we have really just begun to probe. Furthermore, what I am going to discuss in this article applies only to one type of disinfectant. Other disinfectants operate by different mechanisms. The disinfectant that I shall discuss is chemically known as 8-quinolinol or 8-hydroxy-quinoline. A shorter name, and the one that I shall use for the sake of brevity, is oxine.

Oxine is one of our older disinfectants. It was introduced commercially in Germany in 1895 as a medical antiseptic and general disinfectant. Its uses have broadened and today it has a wide range of applications in industry and medicine. I have selected oxine because it is one of our most interesting antimicrobials in its mode of action. Let me illustrate. Let us assume that you take a little poison. If the dose has been small enough there will be no effect or perhaps there might even be a slight beneficial effect. If you now take a little more poison you begin to feel ill effects. A little larger dose and you are sick; still more and you are very sick; and a greater dose and you are dead. If you exceed the last

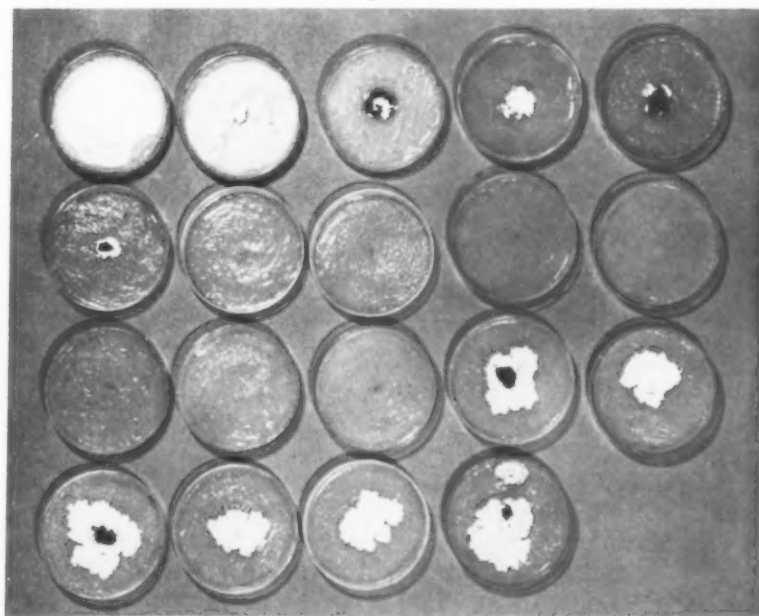
dose there is no change in your response, unless it is that you are slightly "deader."

In Figure 1 we see how a fungus is affected by increasing doses of an oxine type compound. In the photograph petri plates are shown which contain a nutrient medium which has been seeded in the center with spores of a fungus. The fungus spores germinate and grow from the point of seeding. Each plate has twice the concentration of oxine of the previous one. It will be noted that the fungus grows quite well with increasing concentration up to a plate where no growth whatever occurs. As the concentration is increased in the next seven plates there is no growth. Then, with further increasing con-

centration, the "dead" come back to life and start to grow again as shown in the next five plates. Finally, when the concentration reaches the very high value represented by the last plate, we note that the "dead" fungus, which came back to life, is again among the deceased. It is worth noting that a similar "inversion" has been obtained with massive doses of penicillin in test tube experiments.

Let us consider another unusual manner in which oxine acts as a disinfectant. If we take one-hundredth as much oxine as is required to stop microbial growth, there is no effect. But if, to this oxine, is added a small amount of copper salt that is also well below its inhibitory concentration, the

Figure 1



* Paper presented before the 44th annual meeting of the Chemical Specialties Manufacturers Association, Hollywood, Fla., Dec. 10, 1957.

combination completely stops the growth of microorganisms. It has further been demonstrated that while one part of oxine in one hundred thousand parts of a rich bacterial growth medium will completely prevent the growth of *Staphylococci* or *Streptococci* bacteria, oxine is completely noninhibitory to these bacteria. It will therefore be agreed, I believe, that oxine merits our attention.

The first exploratory work to find out how oxine works as a disinfectant was done in 1932 by Hata, the Japanese co-worker of Paul Ehrlich, the father of chemotherapy. Hata suggested the oxine was effective as a disinfectant because it not only had the active phenolic group that is common to so many disinfectants like the cresols, phenols, and resorcinols, but it also had the quinoline structure. In 1943, it occurred to Zentmyer that the activity of oxine might be a result of its unusual ability to combine with metal ions and form chelates. This ability was well-known and oxine is employed as an analytical reagent in the chemical determination of metals. Zentmyer made tests with a fungus that required zinc for its nutrition. When oxine was added to the medium in which this fungus was growing, growth stopped. Zentmyer concluded that the oxine tied up the zinc in an insoluble form, namely the zinc chelate of oxine, and that the fungus was then starved for zinc. He added zinc salts to the medium and the fungus then began to grow again. He knew that the zinc chelate of oxine was not stable in acid solutions and by making the medium acid he prevented oxine from interfering with the growth of the fungus.

Quite independently, Adrien Albert in Australia, at about the same time, had come to the same conclusions about the activity of oxine.

In his experiments he made isomers of oxine with the phenolic hydroxyl group in all of the other seven possible positions. He found that none of these was toxic like

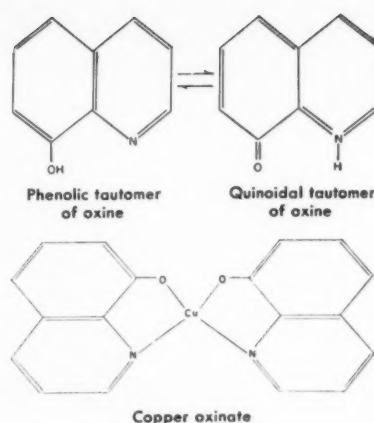


Figure 2

oxine and likewise that none of them excepting oxine would form chelates with metals. He further demonstrated that chemical modifications of oxine which interfere with its ability to chelate would not act as disinfectants. It thus appeared from these findings that the action of oxine was simply to remove a vital metal required by the microorganism. As we shall see from further studies, this simple explanation did not suffice.

Opposition to the chelation theory of mechanism was soon to appear. It was found, for example, that other chelating compounds, which could bind metals, did not have disinfectant properties. Vicklund and Manowitz confirmed the findings of Zentmyer with regard to the reversal of the oxine inhibition by the addition of metals. They found moreover that metal salts would also reverse metal oxinates. It was significant that even physiologically inactive metals such as aluminum had the ability to produce these reversals of inhibition. This indicated that the reversals were not related to the metabolism of the cells but were merely the result of a shift in the dissociation of the oxine chelate. They were the first to propose a chemical equilibrium theory to explain the reversals.

Sexton, in his book "Chemical Constitution and Biological Activity," touched a weak point in the chelation theory when he pointed out that the metal chelates of

oxine were equally or even more toxic than oxine. Obviously, they were saturated with respect to the amount of metal that oxine could bind, therefore, Sexton allowed that perhaps Hata's views had been correct all along.

At this impasse it was evident that more data were necessary if these conflicting views were to be resolved. In the late 1940's, Albert and his co-workers made a startling discovery. They found that a medium, which was ordinarily very toxic when a small amount of oxine was added, could be rendered non-toxic in the presence of an even greater dosage of oxine if that medium was previously treated so as to remove metal ions that could chelate with oxine. In other words, oxine was not toxic in the absence of chelating metals. They concluded that it was the metal oxinates and not the oxine itself that was really toxic. They made another very important discovery. They found that the metal oxinates could be reversed, or rendered non-toxic, by not only excess metal ions but also by excess oxine.

Devises New Theory

In order to explain all these facts, Albert and his colleagues devised a new theory on the action of the metal oxinates as disinfectants. They proposed that the oxine anions and metal cations first react in solution to produce the 1:1 chelate, made up of one molecule of oxine and one atom of copper. This chelate, bearing a positive charge, reacts further in the presence of oxine anions to produce the water-insoluble but oil-soluble 2:1 chelate of oxine to metal. They proposed that the 1:1 chelate is the real toxic entity but, bearing an ionic charge, it is unable to penetrate quickly the lyophilic outer membrane of the microorganism. The 2:1 chelate, on the other hand, has no charge and dissolves in oils. It was suggested, therefore, that it is the latter form in which the compound enters the cell. Once inside the cell, an equilibrium between the two chelate forms is set up and the 1:1 chelate thereby produced is free to

react with the cell's constituents. In the presence of excess oxine, the 1:1 chelate would be suppressed according to the equilibrium equations. In the presence of excess metal ions, on the other hand, the 2:1 chelate form would be suppressed. Inasmuch as the theory requires both forms to be present, one form for penetration of the cell and the other form for reaction with the cell's vital products, the reversals with metal ions or with oxine could be explained as equilibrium phenomena.

Our own work in this field provided substantial confirmation of Albert's theory. First, we wanted to be able to demonstrate the existence of this hypothetical 1:1 chelate. The 2:1 chelate was a yellow-green solid which could be seen and examined. The 1:1 chelate, on the other hand, had never been isolated in solution and was demonstrated only by titration. In our work, we set up an extraction experiment to demonstrate the existence of the 1:1 chelate. We dissolved the copper chelate of oxine in xylene, an oil solvent, and placed this in contact with an equal volume of water in a separatory flask. When the flask was shaken so that there was intimate contact between the two liquids, practically all of the copper oxinate remained in the oil layer. When 10 equivalents of copper as copper acetate were added to the water layer and the flask shaken again, the concentration of copper oxinate (measured spectrophotometrically) in the oil layer was appreciably reduced. When 200 equivalents of copper acetate were dissolved in the water layer and the process repeated, practically none of the 2:1 chelate remained in the oil layer. It was evident therefore that the 2:1 chelate was converted to the 1:1 chelate in the presence of excess copper ions, the latter form being preferentially water soluble whereas the 2:1 chelate, as was seen, was preferentially soluble in the oil layer.

Our work on the disinfectant properties of oxine was done with

fungi whereas Albert's work was done with bacteria. We confirmed the reversals with oxine and with metals. We found that a progressively higher concentration of the metal oxinates could be reversed by a correspondingly progressively increased concentration of the metal ions. As will be seen in Figure 3, the metals had a synergistic effect on the activity of oxine and this effect was in the order of the chelate stability. The copper chelate increased the activity of oxine against molds 100 times, although the amount of copper at this concentration when used alone was completely without effect on the molds. It was demonstrated that this high activity of copper oxinate could be reversed by copper ions in excess as well as by ions of other metals. These results suggested an equilibrium phenomenon as proposed by Albert rather than some physiological effect.

In our work we also pursued another line of approach. We discovered that, unlike oxine, dihalogenated and dinitro oxines retained their effectiveness in the presence of acids. We had been able to show that oxine quantitatively lost its effectiveness as the acid concentration was increased because oxine was converted from the neutral molecule to the cation form. The

antimicrobial activity was in direct proportion to the concentration of neutral molecules remaining. Dichloro oxine is also converted to cations in strongly acid solutions at the expense of the neutral molecules but this form retains its high activity regardless of pH. The reason for this dissimilarity between the two relatives was something of a mystery. It is well-known that ionic forms of disinfectants do not penetrate cell membranes. For example, Albert has shown that relatives of oxine with either sulfonate or carboxylate in the 5 position, which are ionic forms, are not toxic. If, however, these forms are esterified so that they are no longer ionic their toxicity is found to become as high as that of oxine itself.

Cation Toxicity Explained

How then is the high toxicity of the cation of the dihalogenated oxines to be explained? We considered this problem for some months and discussed it with our colleagues but arrived at no satisfactory explanation. Then, suddenly we saw a burst of light. Perhaps our thinking had not been correct. Suppose that the dihalogenated oxines, because of the lyophilic nature of the halogen groups, were actually able to penetrate the cell membrane despite the ionic charge?

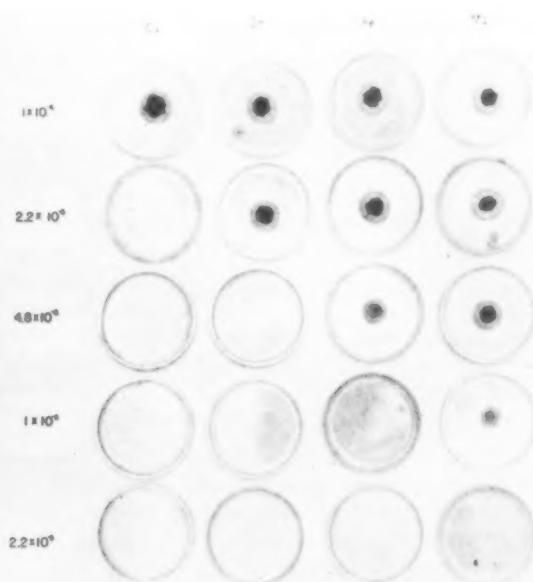


Figure 3—Metal oxinates-molar concentrations.

This would then account for the uniform toxicity across the pH range. For months we had wrestled with this problem but to no avail. Now we had an explanation, but did it really have any basis in fact? We set up an experiment which in a few minutes was to tell us the answer.

Again, we set up our separatory flasks with oil and water. The water solutions were adjusted to neutrality in some cases and in others to a highly acid condition. Separately, in different flasks, we dissolved oxine and dichloro oxine and their copper chelates in the oil layer. After thorough shaking, we attempted to determine into which fraction, the oil or the water, the oxine and the dichloro oxine would be found. We anticipated that the oxine would be in the oil layer in the case of the neutral solution but that it would be in the water layer in the case of the highly acid solution. This was indeed found to be the fact. The question now was whether dichloro oxine would act like oxine, or would be found in the oil layer in both the neutral and the highly acid solutions. (I might say that it was a moment of great suspense when after performing this experiment with dichloro oxine we waited to see whether it was to be found in the oil or water layers.)

Our supposition was confirmed. The dichloro oxine was preferentially soluble in the oil layer in both the neutral and highly acid solutions. The chelates of oxine and dichloro oxine responded in the same manner as had oxine and dichloro oxine themselves. Thus, it was determined that for oxines to be active as disinfectants they must be in a form which will be soluble in the oily membrane that surrounds the cell.

In subsequent work, Albert et. al. made a series of new compounds closely related to oxine called the aza oxines. They measured the partition coefficients between oil and water of these compounds and of the oxines and found that they were toxic in relation to their



William Jaeger of Park & Tilford, New York, and president of Cosmetic Industry Buyers & Suppliers Association, (second from right) congratulates Dr. G. I. Paul Lauffer, director of research and development of Northam Warren Corp., Stamford, Conn., after Dr. Lauffer's speech at recent CIBS luncheon meeting held at Toots Shor's Restaurant, New York. Dr. Lauffer's topic was "What Is Cosmetic Chemistry?". Also shown in photo are Shockley G. Gamage, Magnus, Mabey & Reynard, Inc., New York, CIBS' publicity chairman, (left) and Robert L. Williams, Givaudan-Delawanna, Inc., program chairman.

preferential solubility in oil. It was found, however, that this was not a universal property but applied only to the chemical series that was being investigated. A higher partition coefficient in one series would not necessarily be more toxic than a compound with a lower partition coefficient in another series of compounds. Chelate stability is also of undoubted importance in the activity of the chelate disinfectants, however, this property still requires further investigation.

Since the time that the concept of chelation as being related to the activity of certain disinfectants was first proposed, it has been shown that many important antimicrobial compounds are chelators. Some of these are the antibiotics, penicillin and aureomycin; the anti-tubercular drugs, isoniazid and other hydrazides; the soap disinfectant, tetramethylthiuramdisulfide and related dithiocarbamates, and the very highly active pyridinethiol-N-oxide. It is known also that in living cells the amino acids, some of the vitamins, and the enzymes also form chelates with metals. Just how our disinfectant chelates interfere with the proper function of

the normal chelates in the metabolism of the living cells is a matter for considerable further research. We now know, however, something about the activity of one of our older disinfectants and are in a much better position to be able to synthesize new and better disinfectants, rather than to have to resort to the old hit or miss system of merely screening compounds purely at random.

— ★ —

Kenneth R. Brown Dies

Kenneth R. Brown, 61, former vice-president of Atlas Powder Co., Wilmington, Del., died Mar. 18 at Chester County Hospital, West Chester, Pa., following a long illness. Mr. Brown, who played a major role in the firm's entry into the chemical field, retired as vice-president and director of Atlas, Aug. 31, 1956, after 38 years' service.

Mr. Brown was recipient of the 1955 honor awards of both the Commercial Chemical Development Association and the American Chemical Society's Division of Carbohydrate Chemistry for his work in the commercial development of sorbitol.



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WAX FACTS

NEWS OF INTEREST TO WAX USERS —
DEVELOPMENTS IN THE FIELD OF SYNTHETICS

Special Issue No. 5-58.

IMPORTANT "FIRSTS" IN WAX PROGRESS

This is an account of some of Dura's wax "Firsts". Proudly we present it to our readers in the chemical processing industry. We are humbly grateful to you for the interest which you are continually showing in these achievements. We will strive hard at all times to bring you new ideas and new products, and with you, retain recognized leadership in the field of wax technology.

1950 — DURMONT® 500 — Bleached Montan Wax: A unique colloidal wax for solvent-type paste and liquid polishes, carbon paper and printing ink. Solidifies with a mirror surface.

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1953 — FT® WAX — Snow white, stone-hard, super high melting Fischer-Tropsch synthesis mineral waxes. Widely used today for polishes, overprint varnishes, plastics upgrading, oxydation, hot drink paper cups.

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1954 — DUROXON® WAX — Hard, very pale-colored synthesis mineral waxes specially adapted to all kinds of polish and carbon paper applications. Widely used today for dry-bright emulsions, polymer floor finishes, paste waxes, shoe polishes, auto polishes, fruit coatings, etc. Recognized as "World's Most Versatile Hard Waxes."

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1955 — THE DURA EMULSION TEST SHEET — A test panel of exclusive design for quick-checking experimental results with dry-bright finishes. Coated, white centerstrip permits critical testing of film color.

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1956 — THE DURA SLIPTESTER — A tried, proven and recognized precision instrument for testing the static coefficient of friction of floor waxes. Highly automatic operation. Portable and reliable.

● DURA INTRODUCED IT TO NORTH AMERICA

1958 — THE DIRECT WAX-SAPONIFICATION METHODS — A foolproof, practical way to make dry-bright products with DUROXON WAX, reducing or even eliminating the need for added fatty acids and making most efficient use of amines and alkalis in wax saponification. Results in hardest, toughest, most wear-resistant products.

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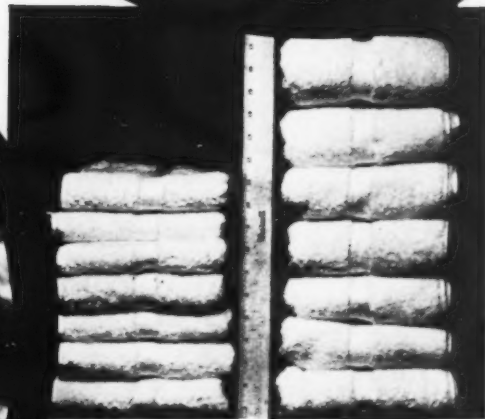
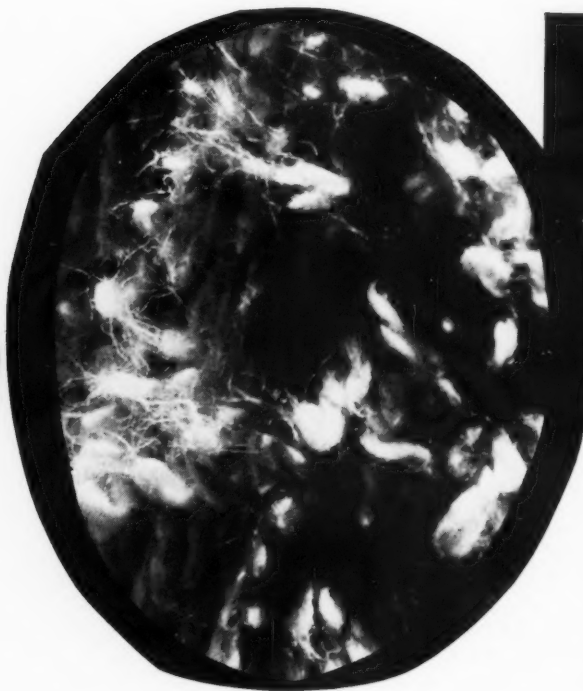
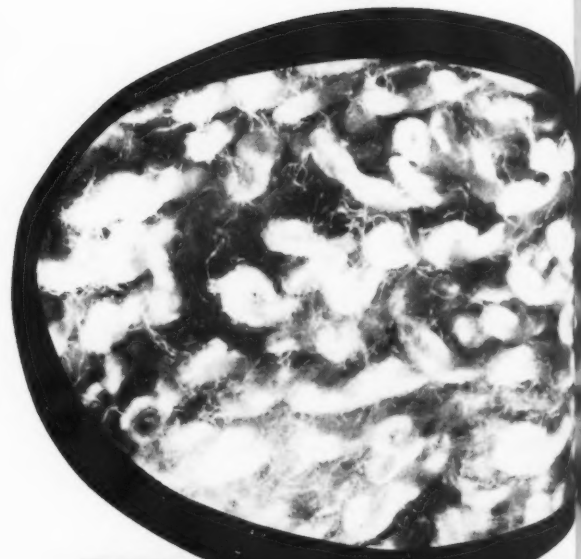
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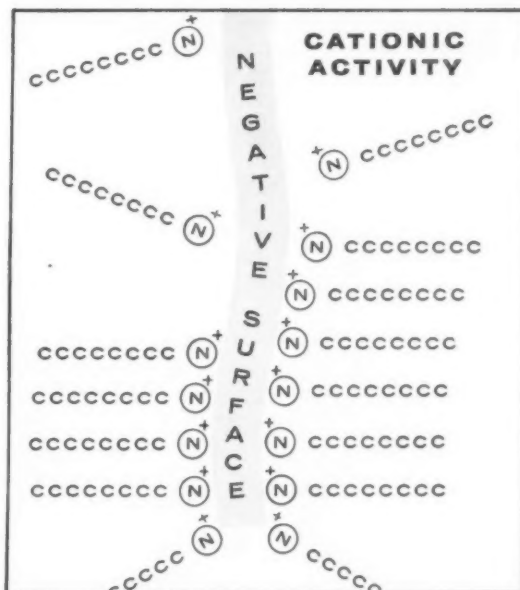


Softness you can see and feel, without loss of water absorbency. In these photos of identical towels, magnified many times, you see one rinsed with Arquad 2HT softener, one without a softener rinse. Notice the difference as the positively charged molecules of Arquad 2HT stick to the fibers. Uppermost photo demonstrates the remarkable result—fibers are fluffy, soft, water absorbent and full of life. Photo on left shows fabric without a special rinse—fibers are stringy, coarse, matted down. Fluffy stack of towels, above on right, again shows the effect of the Arquad solution rinse.

How the Arquads work

A cationic product is substantive because most surfaces are neutral or negatively charged. This causes the Arquads' positively charged nitrogen molecules to be attracted and "plate out" on these surfaces. The surface may be metal, plastic, or fabric—even bacteria, algae or clay.

The drawing at right shows a material placed in an Arquad solution. As the Arquad's positively charged molecules orient themselves toward the negatively charged film surface, they gradually form a monomolecular film.



Where the Arquads work

In oil fields as bactericides. Controlling sulfate reducing bacteria in water floods is a major use of the Arquads. As little as 7 ppm controls the growth of these bacteria, prevents corrosion, and plugging of lines and sub-surface formations.

In plastic manufacture as anti-static agents. Just 1% water solution of an Arquad eliminates normal static electricity of plastics by dissipating the electrical charge from the plastic surfaces.

In water clarification systems as a flocculating aid. The Arquads "settle out" clay and other matter and help many industries produce better water.

By insecticide formulators as emulsifiers. Combined with another non-ionic emulsifier made by Armour, Arquad 2C produces complete emulsifica-

tion and extended storage stability of insecticides, such as Lindane, Toxaphene, DDT or Chlordane.

Besides their cationic activity, the Arquads have a flexible composition of varying chain lengths, range from oil soluble to water soluble. These surface active agents are effective in low concentrations, stable over wide temperature and pH ranges. They are compatible with non-ionic materials and are easy to handle.

Listed here are just a few of the Arquad applications. Find out how the Arquads can help improve your process or your finished products. We will be happy to help you determine the correct Arquad for your specific application. Send the coupon for samples, further product information bulletins and/or a copy of the informative Arquad brochure.



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Quality Control in Antifreeze Production

By Robert R. Bennett*

Commercial Solvents Corp.

Terre Haute, Ind.

QUALITY control has recently been receiving a tremendous amount of publicity. Repeated references to quality control appear in the advertising programs of so many companies that it appears to have become some sort of industrial fad. Quality control is not new but it is a tool being adopted more and more by different types of industries than have used it in the past.

Not too long ago quality in many industries was a matter of individual skills and the responsibility for quality rested with and could be traced to the individual workman. As production techniques have improved, more and more operations have become mechanized and the skills of the individual workers have, in many cases, become secondary to the capabilities of machines and equipment. We all realize that these machines and this equipment have inherent weaknesses which are manifested in lack of uniformity of production. The maintenance of consistent production is necessary in order to establish the quality level, be it high or low. Variations in the product caused by the equipment must therefore be taken into account if any level of quality is to be established and maintained. In most cases, fortunately, the variations in production by mechanical equipment will fluctuate between limits which can be determined and therefore compensated for. We feel that one of the major functions of quality control is to take

into account the variations in a process or equipment and, for that matter, any other phase of operations or plant which are controllable, then try to get them under control.

Quality control should establish procedures which will assure quality maintenance and, of course, improvements in line with the most economical practices in production. The performance of this job is accomplished by (1) establishing proper specifications for raw materials (2) setting up in-process controls (3) establishing finished product specifications which are adequate to describe the finished product and (4) using proper techniques for assuring that the finished products arrive at the customers place of business in good condition.

Raw Material Specs.

IN Commercial Solvents Corporation, raw material specifications are established with the cooperation of the research and development department. Whenever possible, the raw materials used in a product should be commercially available rather than chemical oddities. This will avoid imposing high raw material cost on the finished product. Our research and development department checks the commercially available raw materials in order to select those suitable for our finished products. A specification is then prepared for the raw material. This should be practical and should not impose unnecessary limitations, since these might well

put our finished product at a price disadvantage. We have seen instances in which a chemist would set up a limiting specification when there was absolutely no necessity for it.

Commercial Solvents Corporation sells pure methanol which is used for purposes other than antifreeze. One of our customers has for years required a special grade of methanol. His specification indicated a water content considerably below that of our regular published specification for methanol. Recently, one of our chemists was visiting this plant and among the subjects discussed was the methanol specification. We learned that the customer's process called for methanol in an aqueous solution. Obviously his specification was not a practical one.

We feel that realistic specifications must be developed for the raw materials we purchase and each shipment of raw materials received in our plants is checked in the laboratories to insure that the shipment involved complies with the specifications we have established. Samples of incoming shipments of raw materials are retained in our laboratories for future reference, should any difficulty develop in the products made from them.

Container Control

WE HAD to write specifications to describe the metal containers in which antifreeze is packaged because different antifreezes may require different types of containers. I am sure that most producers of antifreeze have at

* Paper presented during the 44th annual meeting, Chemical Specialties Manufacturers Association, Hollywood, Fla., Dec. 10, 1957.

CARBIDE'S Morpholine *means*



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If you are making rubless polishes—whether for the home, factory, or office—then you need Morpholine. Reasons why? Morpholine based rubless polishes dry quickly—fast enough in fact to allow traffic on the floor shortly after application.

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Other chemicals from Union Carbide—triethanolamine, dimethyl ethanolamine, and TERGITOL nonionic NPX—are valuable in making rubless polishes. Suggested formulations are given in the 92-page "Emulsions and Detergents" Booklet. This booklet also contains technical data and suggested formulations for "soluble" oils, solvent emulsions, wax emulsions, oil and wax polishes and detergents. You'll want a copy—it has helped others improve their products or find new avenues for profit.

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"Tergitol" and "Union Carbide" are registered trade-marks of Union Carbide Corporation.

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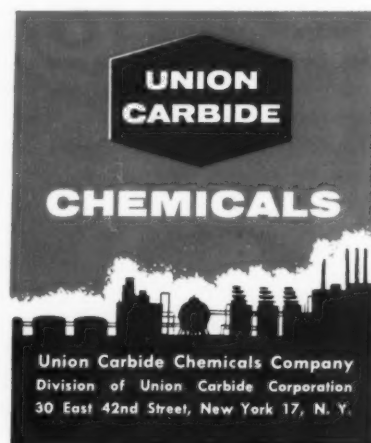
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U.S.I. CHEMICAL NEWS

May

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A Series for Chemists and Executives of the Solvents and Chemical Consuming Industries

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1958

A.I.Ch.E. Marks 50 Years Of Progress This June

The American Institute of Chemical Engineers celebrates its Golden Jubilee this year. During the week of June 22, leaders of the American chemical industries, internationally-known figures in the chemical engineering field, and thousands of other members of the A.I.Ch.E. will gather at Philadelphia to attend technical sessions and the official banquet, and to witness the awarding of special achievement citations.

Since 1908, the American chemical process industries and the A.I.Ch.E. have grown together, helping each other advance into the present "Age of Chemistry." The A.I.Ch.E. has been a guiding force behind this progress. U.S.I. itself, founded in 1906 as a producer of industrial alcohol, could hardly have attained its present size and diversification without its chemical engineers and the organization behind them.

To quote the publisher of the Institute's official organ: "From the impressive plateau of its 50 years of progress, the American Institute of Chemical Engineers can look back with pride on a record of outstanding achievement, and forward with confidence to continued service to mankind."

New Lanolin Derivatives Soluble in Water, Alcohol

Polyoxyethylene derivatives of acetylated lanolin have been developed which are completely soluble in water, alcohol, and many oils and solvents. They yield persistent emollient films and have solubilizing properties desirable in cosmetics, pharmaceuticals, toiletries and aerosol formulations.

The materials are non-greasy, clear liquids designed to give a soft, non-tacky after-feel when incorporated into water and alcohol preparations and emulsions. They are produced in two forms: completely acetylated for applications where a high alcohol content is essential; and partially acetylated for aqueous and weak alcohol preparations. The higher the degree of acetylation the greater the hydrophobic and substantive characteristics of the material.

These new lanolin derivatives are suggested for aerosols, shave lotions and creams, hair tonics, rinses and shampoos, insect repellents and sunscreens, deodorants, anesthetics and antiseptics, among many other drug and cosmetic use possibilities.

Fluorinated Polyethylene Keeps Air and Gases Out, Odors and Flavors In

A recent patent claims that the addition of 0.03-3.5% by weight of fluorine to the surface of polyethylene films and bottles makes them substantially impermeable to atmospheric gases, perfume components, aromatic flavor constituents, and preserving or pressurizing gases. The properties of the polyethylene remain

MORE

SRE and Shippingport Reactor Mark Important "Firsts" in Atomic Power Program

SRE First Reactor to Supply Heat to Conventional Power Plant; Shippingport First Complete Commercial Atomic Power Plant

The Sodium Reactor Experiment in Southern California — first non-military nuclear reactor to feed heat into commercial power generating equipment for conversion to electricity — is a sodium-cooled, graphite-moderated experimental

atomic power plant. Built for the Atomic Energy Commission, its purpose is to develop technical data for designing, constructing and operating full scale nuclear plants which will produce power economically.

In this reactor, liquid sodium metal in a closed system is circulated through the core, picking up reaction heat which it transfers to a second, non-radioactive closed sodium system. From this second system the heat is transferred to the power generation equipment of the Southern California Edison Company.

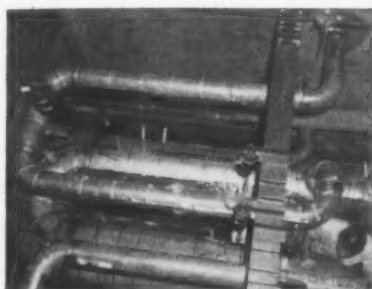
Sodium Coolant Has Advantages

Sodium makes an excellent reactor coolant because of its relatively low neutron-absorbing characteristics, good heat transfer properties, low melting point and high boiling point. High temperatures without high pressure can be produced when sodium is used as coolant.

As part of the experimental program, various fuel elements, components and structural assemblies are being studied in the SRE system. Right now the reactor uses uranium slightly enriched with uranium-235 in the core. Cores containing thorium-uranium alloys are planned for future investigation.

Shippingport Uses Zr, Hf, in Core

The new central-station atomic power plant at Shippingport, Pa. — first in this country to feed electricity into a commercial grid — contains in its core some 14 tons of uranium clad in zirconium metal and zirconium alloy, and control rods made of hafnium and zircaloy.



View of sodium-to-sodium heat exchanger which carries heat from SRE core to power generators. (photo courtesy Atomics International)

Zirconium metal has an extremely low nuclear cross-section — allowing free passage of neutrons — and makes an ideal cladding and supporting material for uranium because it offers minimum interference to the fission process, is corrosion and heat resistant, and structurally strong.

In the Shippingport reactor, the core is composed of 32 seed fuel elements containing about 165 pounds of highly enriched uranium clad with zircaloy. These seed elements are surrounded by 113 blanket fuel elements containing 14 tons of natural uranium clad with zirconium alloy.

Hafnium, although found closely associated with zirconium in nature, has the opposite type of cross-section characteristics. It absorbs neutrons readily, and consequently makes excellent control rod material. In the Shippingport reactor core, each of the 32 seed elements has its own two-part control rod. The absorber section is made of hafnium, the follower portion of zirconium alloy.

This pressurized water reactor plant started delivering electricity on December 18, 1957. It uses ordinary water to moderate the nuclear fission process, and the water under pressure is circulated through the reactor core to remove the heat. The hot water is pumped through heat exchangers to produce steam which in turn is used to power the generating turbines. The plant can deliver 60,000 kilowatts into the system of Duquesne Light.



At Shippingport during final stages of installation, reactor core is being lowered into pressure vessel. Zirconium-clad uranium fuel is contained in this core. (photo courtesy Westinghouse)

May

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U.S.I. CHEMICAL NEWS

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1958

CONTINUED

Polyethylene

unchanged.

This development should make it possible to package foods, colognes, other toiletries containing perfumes, aromatic solvents, mineral and vegetable oils and aerosol formulations in polyethylene films or flexible containers — without loss of volatile constituents or entry of deteriorating gases.

The fluorination process is claimed to be simple and economical. Film or bottles are washed free of lint, grease, dust and all foreign matter which might cause fluorine to ignite the polyethylene. After this, the film or container is contacted with pure fluorine or a fluorine-inert gas mixture, at room temperature or at up to 50°C. The length of contact varies depending upon the equipment, fluorine concentration, temperature and thickness of film or bottle.

While clarity, flexibility, tensile strength, heat sealability and ultraviolet transmittance are claimed to remain unchanged, permeability of the polyethylene is decreased many fold. In a typical test with a volatile liquid, 5.6% of allyl caproate was lost from an untreated polyethylene bottle in 40 days. Only 0.05% was lost from a bottle which had received a six-hour fluorine treatment. Testing for oxygen transfer, an untreated film transmitted 303 cc per 100 square inches of surface in 24 hours. A treated film transmitted only 46 cc.

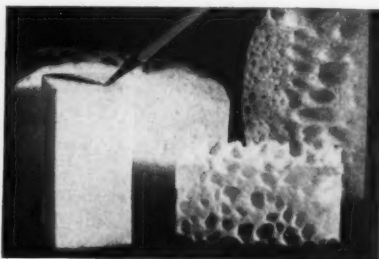
Silicone Additives Insure Uniform Cell Structure in Flexible Urethane Foams

Silicones are now being added to flexible polyurethane foams to give smaller, more even cell structure, uniform resilience and flexibility, and better appearance.

One type is a water-dispersible emulsion which can be added directly to the catalyst phase of the foam system. The manufacturer recommends that it be added as the last component when making up this phase, and claims

that it will remain uniformly dispersed from several days to two weeks in most catalyst systems. Another type is a fluid added directly to the prepolymer and dispersed by thorough agitation.

Flexible polyurethane foams have evoked wide-spread interest as insulation for both industrial and consumer use, as cushioning, and for a variety of specialty applications. They can be produced from the reaction of polyesters with diisocyanates. An intermediate that can be used to produce the polyesters is U.S.I. ISOSEBACIC® Acid, a mixture of C-10 dibasic acids.



Polyurethane foam containing silicone additive has smaller, more uniform cell structure than other samples containing no silicone.

New Sterilizing Method Employs Ethylene Oxide in Safe Aerosol Formulation

The U. S. Department of Agriculture's Entomology Research Division reports that they have found a way to combine highly volatile ethylene oxide with ordinary aerosol propellants to form a non-flammable sterilizing formulation.

Ethylene oxide is a known germicide, insecticide and sterilant, but its highly flammable nature has been a deterrent to its widespread use for these applications.

The new aerosol is designed for sterilizing sensitive materials which cannot stand treatment by steam, dry heat or liquid chemicals.

TECHNICAL DEVELOPMENTS

Information about manufacturers of these items may be obtained by writing U.S.I.

Radioactive isotopes and isotope-labeled compounds are described in a new price list now available. Included are C-14 compounds, heavy water, deuterium- and tritium-labeled compounds, N-15 compounds of high isotopic concentration. **No. 1350**

Fatty amines are discussed in new 24-page booklet covering method of manufacture, applications, chemical reactions, vapor pressure, solubility and handling. **No. 1351**

1723 Voluntary national standards approved by the American Standards Association are listed in free 67-page index just published. Standards in fields of chemicals, petroleum, rubber, textiles, are included among others. **No. 1352**

Sodium dispersions which improve chemical reaction efficiencies by providing more active surface area are described in 42-page booklet. Latest production equipment for continuous preparation of dispersions covered. **No. 1353**

Paper-strip electrophoresis analysis of various proteins, hemoglobins, amino acids and many organic and inorganic mixtures is outlined in a new catalog describing equipment for the purpose. **No. 1354**

New organic phosphate insecticide (O,O-diethyl S-p-chlorophenyl-thiomethyl phosphorodithioate) is claimed non-systemic, long-residual, less hazardous than many other organic phosphates. For control of mites and broad range of other insects. **No. 1355**

Plastic pipe for safe transportation of drinking water is discussed in new 12-page folder. Includes types of plastics used, method of joining lengths, suitable applications, standards set by Natl. Sanitation Foundation. **No. 1356**

Chemical analysis of solid surfaces by nuclear methods is described in 33-page U. S. Army report which can now be purchased. Methods used to detect all elements to depth of several microns (sensitivities from 10⁻⁸-10⁻⁶ gm./cm²). **No. 1357**

Dangerous properties of over 8,500 chemicals, and safe practices in handling, storing and shipping, are outlined in a 1476-page book just put on sale. Toxicity, fire, radiation, air pollution, explosion hazards are covered. **No. 1358**

Tritiated thymidine is now offered in research quantities as a new tool for studies of growth. Material is said to be suitable for investigating cell formation and turnover, genetic patterns, effects of intracellular radiation and growth inhibition in neoplasms. **No. 1359**

PRODUCTS OF U.S.I.

HEAVY CHEMICALS

Sodium, Metallic: cast solid in tank cars, steel drums, pails; bricks in barrels, pails.

Sodium Peroxide, Sodium Sulfite, Sodium Sulfate

Ammonia, Anhydrous: commercial & refrigeration. Tank cars or tank wagons.

Ammonium Nitrate, Nitric Acid, Nitrogen Fertilizer Solutions

Phosphatic Fertilizer Solutions: wet process phosphoric acid.

Sulfuric Acid: all strengths, 60 Baume to 40% Oleum. Also Electrolytic grade to Federal specifications. Tank cars or tank wagons.

Caustic Soda, Chlorine

OTHER PRODUCTS

PETROTHENE® Polyethylene Resins

Pharmaceutical Products: DL-Methionine, N-Acetyl-DL-Methionine, Urethan USP, Riboflavin USP, Intermediates.

Alcohols: Ethyl (pure and all denatured formulas); Proprietary Denatured Alcohol Solvents SOLOX®, FILMEX®, ANSOL® M, ANSOL® PR.

Organic Solvents and Intermediates: Normal Butyl Alcohol, Amyl Alcohol, Fusel Oil, Ethyl Acetate, Normal Butyl Acetate, Diethyl Carbonate, DIATOL®, Diethyl Oxalate, Ethyl Ether, Acetone, Acetoacetanilide, Acetoacet-Ortho-Chloranilide, Acetoacet-Ortho-Toluidide, Ethyl Acetoacetate, Ethyl Benzoylacetate, Ethyl Chloroformate, Ethylene, Ethyl Sodium Oxalacetate, Sodium Ethylate, ISOSEBACIC® Acid, Sebacic Acid, Urethan U.S.P. (Ethyl Carbamate), Riboflavin U.S.P., Pelargonic Acid, and 2-Ethyl Heptanoic Acid.

Animal Feed Products: Antibiotic Feed Supplements, BHT Products (Anti-oxidant), Calcium Pantothenate, Choline Chloride, CURBAY B-G®, Special Liquid CURBAY, VACATONE®, Menadione (Vitamin K₃), DL-Methionine, MOREA® Premix, Niacin USP, Riboflavin Products, Special Mixes, U.S.I. Penicillin, Vitamin B₁₂ Feed Supplements, Vitamin D₃, Vitamin E Products, Vitamin E and BHT Products.

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U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corporation
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some time or another learned about product-container compatibility through some rather expensive experience. Before a container is considered suitable for a certain product, a complete study is made by the research and development department in cooperation with quality control. We package at least 10,000 gallon batches for container studies. These test packs are shipped to all types of climates and stored for extended periods under all imaginable conditions before a container specification for the product involved is written. In our opinion, a minimum of two years is necessary for a storage test before a container is selected. Since the container plays such an important role in the storage characteristics of the final product we, with the cooperation of our container suppliers, developed a statistical sampling procedure for incoming empty containers which gives about 97 per cent assurance that all the containers in the sampled car comply with our specifications. Sampling and inspection of incoming containers is an expensive operation but we considered it justifiable since over 98 per cent of our complaints were in some way related to the package or container compatibility.

A quality control program within a company does not necessarily imply that the company is buying the best raw materials available. Quality control should be guided, to some extent, by "dollar signs". Quality control should specify raw materials which are suitable for the product to be produced from them. Furthermore, a quality control program within a company, does not necessarily imply that the company is producing the best product it can make.

Fleet testing and simulated service testing are dealt with in a paper by Gundlach, Green, Moore, and Sweatt of National Carbon Co., which appeared in *Soap and Chemical Specialties*, Jan. and Feb. 1958. All this endeavor is directed toward the end of producing an antifreeze which is suitable in serv-

ice. There is no need nor is it wise to produce a vastly superior product since its price would be prohibitive and it is quite probable that the customers would not be able to appreciate or even detect its extraordinary properties. Research and development does and should continue to study and develop products for the future, when such products will become necessary to make improved, more critically designed cars operate properly. What use would we have had for the high octane fuels which are now available if they had been on the market in the early 1940's? It wasn't until automotive engineers increased compression and got into the horsepower race that better grades of automotive fuel became a necessity. Industry must keep abreast of the time and keep an eye on the future to be ready to produce new, improved products when the machines of the future make the present type materials obsolete. It would be expensive and actually wasteful for us to try to market the products of the future to be used in today's cars.

In-Process Controls

ANOTHER necessary function of quality control is the setting up of in-process controls. This function involves a study of all factors connected with the manufacture of a product. In antifreeze production, this would mean the study of blending equipment, blending time and the possibility of product variation from can to can at the time of filling. We have found that with the equipment now installed little or no variation occurs between the cans of antifreeze filled in the early part of the batch and those filled near the end of the batch. This condition did not come about by chance.

The finished antifreeze is circulated between the batch tank and the filling machines continually during the filling operation. At no time can the blended product be permitted to stand in the lines which are feeding the filling machines. If it does, slight varia-

tions may occur from time to time as the filling machines are started and stopped. This was particularly critical a few years ago when two-phase products were being filled. In spite of all our work to make the filled product uniform throughout the run, we still continue to take samples of the product being filled at intervals throughout the filling run and these are analyzed in the laboratories to assure that no variations are occurring.

Fill Control

OUR filling operation, and by this I mean particularly the fill control operation, is based on good statistical practice. Obviously, we do not tare weigh and gross weigh each can to determine that it contains the exact volume indicated on the label, but we do take precautions to insure that our customers get what they pay for. The statistical control of our filling operation is relatively simple and the method can be most easily explained by taking a specific example. The example is based on the fill control of "Peak" antifreeze by one of our gallon filling machines. We did not measure the volume in the containers; but calculated the fill control on the basis of the weight fill.

To do this, we first established the magnitude of variations inherent in the filling machine. This was accomplished by setting the machine so that each filling port delivered at the nominal rate of one gallon. Then, under normal operating conditions, many cans were filled and their weights recorded. From these fill weights, we determined the standard deviation, which is a measure of the degree to which the filling machine ports actually deviate from the pre-selected setting of one gallon. The particular example under study showed the standard deviation of fill weights to be 0.01 pounds.

If we graph the relative frequencies with which different fill weights came from the machine we notice that the distribution of fill weights conforms roughly to

Get knockdown, staydown

impact for your aerosol insecticides

with safe, economical

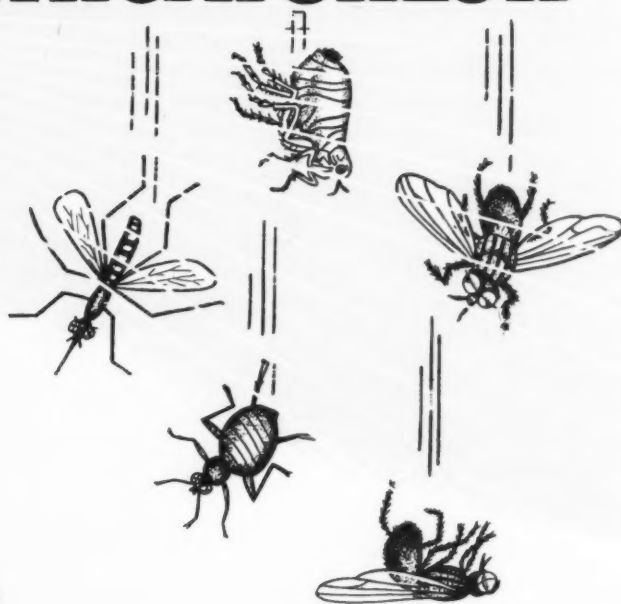
GEIGY

METHOXYCHLOR



GEIGY METHOXYCHLOR "90"

A granular product containing 90% technical methoxychlor and 10% deodorized petroleum distillate for the preparation of aerosols and residual sprays. It is readily soluble in most solvents used in the preparation of household and cattle sprays. Available in 100-pound drums.



Yes—put impact in your aerosol and spray formulations with the *quick knock-down, positive stay-down* action of Geigy Methoxychlor.

Safe, economical Geigy Methoxychlor helps build your aerosol sales with its reliable action.

Methoxychlor is effective on a variety of insect pests. Its low toxicity to man and animals and long residual toxicity to insects makes this *general purpose insecticide* ideal for aerosol applications.

Geigy Methoxychlor is compatible with pyrethrins, allethrin, and piperonyl butoxide.



ORIGINATORS OF DDT INSECTICIDES

GEIGY AGRICULTURAL CHEMICALS • Division of Geigy Chemical Corporation • Saw Mill River Road, Ardsley, New York

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what is known as a standard or normal curve. The nature of this curve is such that if certain multiples of the standard deviation are marked off along the horizontal axis, letting the mean, or most probable value, be 0, and proceeding in positive or negative directions, assignable percentages will lie above or below certain multiples of the standard deviation. Thus, 95 per cent of all probable cases lie in the area from negative infinity to plus 1.645 standard deviations. Similarly, the area from negative infinity to plus 1.96 standard deviations contains 97½ per cent of all probable cases. What we in essence did was to pick up the distribution curve and move it in a positive direction so that the process average, which we had previously set at the nominal rate of one gallon, was now set at such a rate that only a certain assignable percentage of all cans filled fell below any preselected limit, the limit in this case being, of course, one gallon.

In our particular case, it was decided to preset our filling machine so that at least 95 per cent of the filled cans contained one gallon or more. As shown in the graph (Figure 1), we shifted our target fill .0165 pounds above the weight of an actual gallon. If we had elected to guarantee that 99.9 per cent of our cans contained one gallon or more, the overflow would have been 0.0309 pounds. Normal variation of the filling machine on the high side, in this instance, would overflow a portion of the

regular one gallon containers. More important, statistics show us that the containers from the one gallon machine used in the example will, in any given canning season, average .0165 pounds more than an actual gallon for all cans filled.

Finished Product Control

SPECIFICATIONS for the finished products are the result of work done by research and development, who study every newly formulated finished product to establish the range of variations permissible while safeguarding the suitability of the product for its intended end use. This activity requires much time and work. When we last changed our "Peak" formula, it was in the development department for over three years. Over two years of this time were required for simulated service testing and fleet testing. During this period, variations were studied within the formula so that limiting values could be placed on each of its ingredients and as a result of this work finished product specifications were developed.

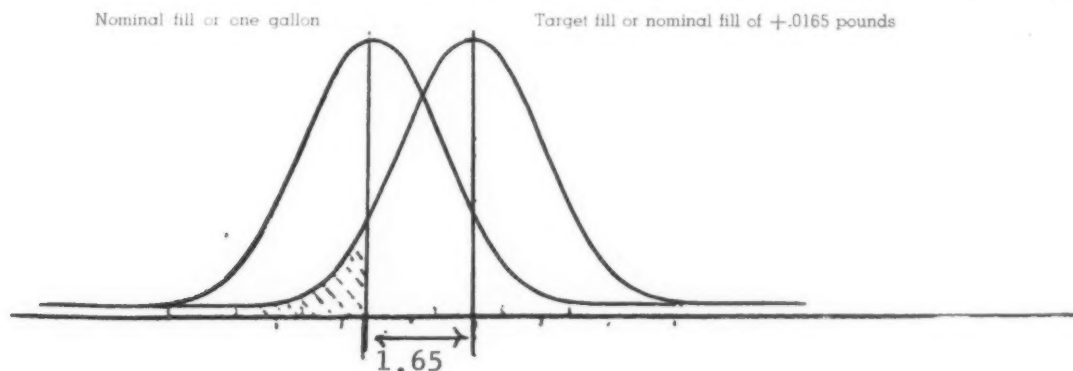
In Commercial Solvents Corporation the quality control department is set up separately from research and development; production, and sales; however, our work is concerned with all three. Much of our department's work is in the production plants, but our personnel does not report to a production manager. We do not feel that the department making a product should approve or reject its own production. Human nature is such

that an individual might tend to approve his own production on some occasions, even if it is questionable. For this reason, quality control was set up as a completely separate group and is in no way responsible to the production department.

A very close relationship exists between Quality Control and research and development. This is necessary since the work of research and development must reach production through quality control. In the case of a new antifreeze formula, research and development supplies the formula, results of testing programs, specifications for the product, as well as storage test data and any additional work which is done in bringing the new formula project to completion. In this instance, the quality control department is interested in raw material specifications and satisfactory laboratory methods to check the various properties on the specification. Established test methods are equally important for finished product specifications. No specification is complete until laboratory methods have been developed which can be handled satisfactorily by all our company laboratories. We continually double check the methods to be sure that all our laboratories can duplicate each other's work.

Quality control supplies production department with antifreeze formulas to be manufactured, testing methods, sampling procedures and any suggested production tech-
(Turn to Page 114)

Figure 1. Graphical representation of the selection of the target fill. Shaded area is five per cent of production in this example.





van Ameringen-Haebler, Inc.

DOES IT PLEASE THE

Lady?

* As a matter of fact, it *must* please the lady if an aerosol is to sell successfully. The very nature of a pressure-packed product makes its odor the *most* important factor in sales appeal and product acceptability.

VAH can help you to please the lady . . .

IN MATTERS OF CREATIVE FRAGRANCE

The VAH perfumers will create for you a distinctive fragrance that is not only a thing of true beauty in itself, but one that is ideally suited to the product, and to the market you intend to influence. You *know* it will be technically right and within the price range you determine. None is better able to serve your fragrance needs than VAH.

IN MATTERS OF AEROSOL TECHNIQUES

The VAH Aerosol Laboratory, excelling in facilities, ability and experience will be happy to guide you in the complete development of your aerosol product. VAH customers enjoy all these services:

- * Product Development
- * Formulation For Compatability
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- * Test Packaging
- * Valve and Package Recommendations
- * Filling Procedures
- * Production Trouble Shooting

If you're thinking of a new aerosol product, think of **VAH!**

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MAY, 1958

103



CARNAUBA...

... waxes strong in spite of competition from synthetics

First step in obtaining carnauba wax is the cutting and gathering of leaves from the carnauba palm. Surface of palm leaves is coated with sticky substance that finds its way eventually into many floor waxes. Law limits the number of cuttings per tree.

IN spite of competition from various replacements of natural or synthetic origin, carnauba wax, like the stately palm from which it is derived, still holds its head high, figuratively. Brazilian sources report sales of carnauba wax continue strong to the United States and Europe. U. S. imports, principally through the Port of New York, from Jan. 1 to April 30, 1958 have totaled 39,019 bags. This compares with total 1957 U. S. imports of 96,163 bags.

The unique properties of

Palms are split before sun drying to get maximum yield, then are laid out on the ground to sun dry. When dry, the leaves are hand beaten to remove the now powdery carnauba. Crude mechanical beaters are also used. Leaves go in one end and powder emerges

from small opening near the right end of tank. Powder is melted in crude vats (bottom row) and then coarsely strained through burlap. Next the molten wax is drawn off, ready to be poured into mold for hardening, as shown on facing page.



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Molten carnauba wax, following straining, is poured into large trough-like molds where it cools into a solid mass.



From the lighter bags are loaded offshore into the hold of ocean going vessel which carries the wax to user countries.

Following grading, the wax is bagged and carried to dockside where it is loaded on to a lighter. This photo was taken at Parnaiba, important wax shipping point in Brazil.



Hardened wax is broken up into lumps and sorted into various grades. North Country No. 1, top grade of carnauba is shown in foreground.

carnauba make it the criterion against which all other waxes are measured for hardness, gloss, and lasting properties.

The photographs on this and the facing page, just received from Brazil, and loaned to us by M. Argueso & Co., Mamaroneck, N. Y., wax importers and refiners, are from a collection of that company. They graphically depict the harvesting, primitive processing, sorting, bagging and transfer of crude carnauba from lighter to ocean going vessel, which will eventually bring the wax to the United States. In general this sequence is followed from left to right and top to bottom in the photographs on these pages.



Why Du Pont's Versatile 90% Methoxychlor (OIL CONCENTRATE) Should be Included in Your Aerosol and Oil Spray Insecticide Formulations

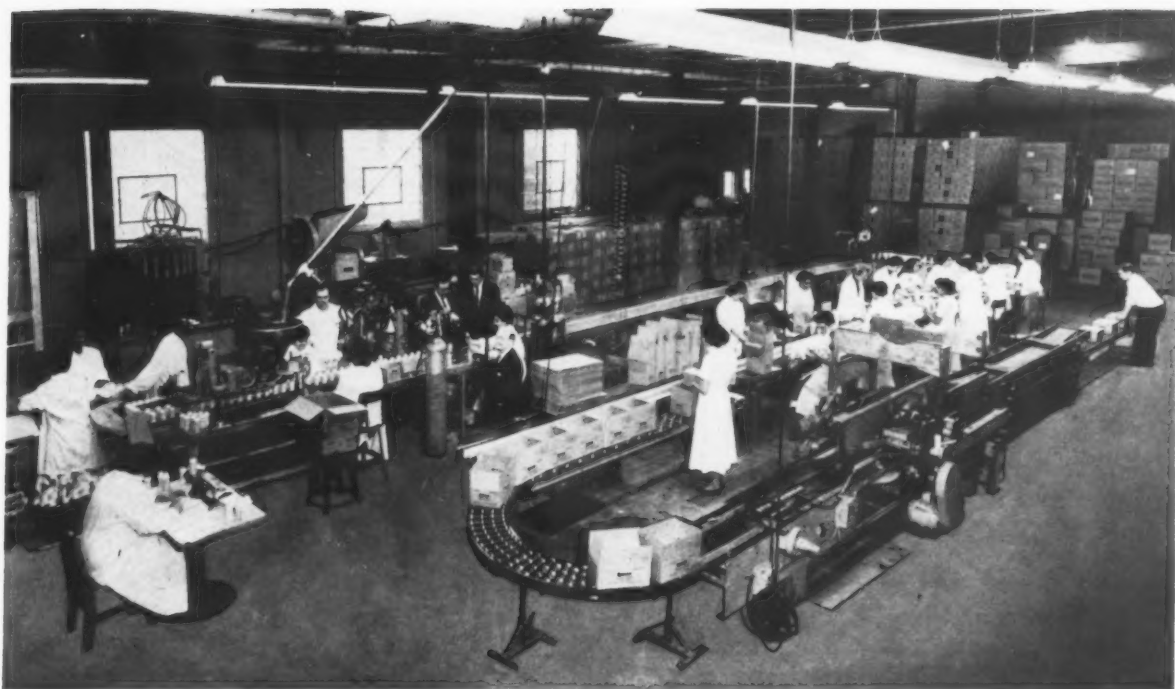
1. When methoxychlor is combined with pyrethrins and piperonyl butoxide, the result is fast knockdown and high kill! This combination is extremely effective against flying insects and is also a potent contact killer of crawling insects.
2. Methoxychlor in combination with allethrins, synergist 264 and isothiocyanates contributes fast action with good middle and late knockdown plus high kill. These combinations give effectiveness and economy!
3. Methoxychlor, when added to synergised pyrethrins, extends activity against garden insects.
4. Now, with the discovery of a new property, methoxychlor is actively synergized by Sesoxane. This combination alone or with other knockdown agents will extend activity still further against roaches and ants, granary insects, black carpet beetles and even aphids and mites.



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

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Houston 25, Texas 1100 E. Holcombe Blvd.



Overall view of the nitrogen pressure packing line at the contract filling plant of Fluid Chemical Co., Newark, N. J., custom loader. Product being filled here is "Ipana" toothpaste of Bristol Myers Co., New York. Note nitrogen cylinder in foreground.

Nitrogen in Pressure Packaging

SALES of pressure packaged toothpaste, may reach the 100,000,000 unit mark in 1958, and possibly overtake hair-sprays as the largest selling class of aerosols. Since toothpaste and a number of viscous products are, or can be, pressure packaged using nitrogen as the propellant, the future of nitrogen in aerosols is extremely bright. This evaluation was advanced last month by a representative of Precision Valve Corp., Yonkers, N. Y. Precision is the largest supplier of aerosol valves, including modified units for nitrogen propelled products.

In addition to toothpaste, a wide variety of viscous products lend themselves to successful non-aerated stream dispensing with nitrogen. In the personal products field (other than toothpaste) Charles Antell leads the parade of nitrogen propelled pressure packages with "Formula 9" hair groom, placed on the market recently.

By Charlotte Haas

Associate Editor

Hand lotions, creams, pharmaceuticals for topical applications, and even shampoos, are currently being investigated. The user of a nitrogen propelled personal product does not experience the chilling sensation often attributed to other propellants. In the toiletries field and particularly with medicinals this is an important consideration.

At least one liquid detergent is reported being tested for nitrogen pressurizing. If successful it will make its appearance on the market with a metered dosage valve. Other household chemical specialties in this form are under consideration and in various stages of testing.

Pressure packaged products employing nitrogen as a propellant actually made their debut in the food field. The product was "Sifer's Chocolate Flo'z" (see *Soap and*

Chemical Specialties, p. 147, Oct. 1957 issue).

Why should the household chemical specialties and food industries turn to nitrogen for pressure dispensing of certain products? Low cost is, no doubt, a powerful reason for nitrogen's emergence as an important propellant. The amount of nitrogen needed to pressurize satisfactorily a six-ounce container of toothpaste costs about 15 thousandths of a cent. A minute quantity of the gas suffices to obtain pressure levels necessary for efficient dispensing. The reason is nitrogen's near insolubility in oils, sugar solutions, etc.

Unlike other compressed gases (carbon dioxide and nitrous oxide, for instance) nitrogen does not go into solution with the concentrate. Therefore, there is no expansion of dissolved gas to cause foaming and aeration when the formulation is dispensed.

Nitrogen is an inert gas. Its

presence in an aerosol unit does not alter in any way the characteristics of the product. The advantages of this fact are obvious. They assume particular importance in pressure packaging foods and pharmaceuticals. The gas itself is non-toxic and has a long record of medicinal use. Owing to its inertness it does not cause any changes in the product which might raise any toxicological doubts.

Owing to the absence of solubility and chemical activity, nitrogen does not permeate the sealing materials. Weight loss by diffusion is, therefore, minimal, about 7/100th of a gram per year. Units containing the conventional solvent system may have a yearly weight loss of one to two grams.

Nitrogen units are usually pressurized with the gas to equilibrium at 90 to 95 p.s.i.g. Since pressure of a compressed gas is inversely proportional to volume at a given temperature, pressure declines as the head space in the container is increased with falling product level. In other words, a unit starting out at 90 p.s.i.g. may end up with 35 p.s.i.g. or less. Depending on the viscosity of the product this pressure may or may not suffice for adequate dispensing. It is obvious that such aerosols require careful tailoring. Relationship of pressure, headspace and product viscosity is very critical.

Conventional pressure filling equipment can in many instances be used for nitrogen filling with only minor modifications. Special regulators and pressure testing equipment are required. Since the usual charge is about three quarters of a gram, there is not much margin for error and the nitrogen propellant is generally checked both by weight and pressure. The sensitivity of the operation can be evaluated by comparison with the liquid gas propellants, which may represent from 50 to 95 per cent by weight of the entire formulation. Crimping also must be regarded as a more critical step in nitrogen packaging than in the case of liquefied gas.

Equipment especially designed for nitrogen pressure filling is currently being built by Alpha Engineering Works, Inc., Mount Prospect, Ill.; J. G. Machine Works, 452 West 46th Street, New York; Mojonner Associates, Inc., Franklin Park, Ill., and others.

Among custom fillers who have announced that they have facilities to pressure package products using nitrogen as a propellant are the following firms: Aerosol Techniques, Inc., Bridgeport, Conn.; G. Barr & Co., Chicago; Connecticut Chemical Research, Bridgeport; Fluid Chemical Co., Newark, N. J.; Old Empire, Inc., Newark; Powr-Pak, Inc., Bridgeport; Gene Rose Co., Chicago; Stallfort Pressure-Pak Corp., Baltimore; and Western Filling Corp., Los Angeles. Also Aerocide Dispensers, Ltd., Weston, Ont., Canada.

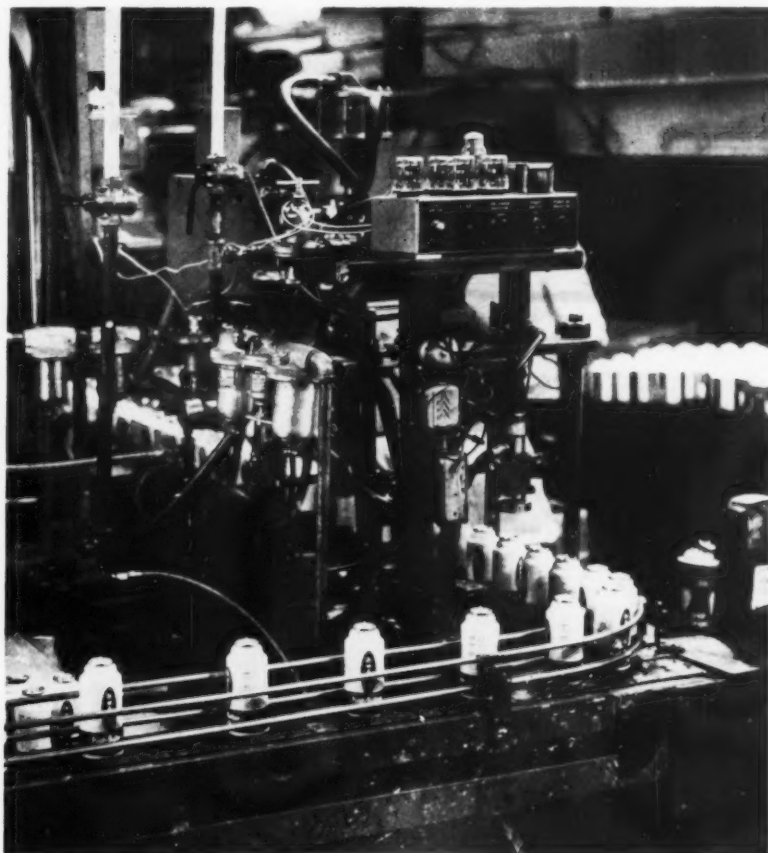
Various containers have been tested for packaging nitrogen propelled specialties. All types of

metal containers including aluminum will successfully serve for products pressurized by nitrogen. No corrosion problem is created by the propellant owing to nitrogen's inertness. Coated glass has been found suitable for low pressure units (40 p.s.i.g.) designed to dispense thinly viscous lotions, etc. Plastic containers have not been tried and may conceivably present a distortion problem.

Obviously the formulation of a product intended for nitrogen propelled dispensing is very critical, especially where viscosity is concerned. Required pressures are closely linked to product mobility. Valve impaction and excessive residual product loss are some of the penalties of faulty formulation or insufficient testing. Maximum residual losses currently reported by two of the major nitrogen propelled toothpaste marketers range from five to 10 per cent.

(Turn to Page 111)

Nitrogen filling line at Connecticut Chemical Research Corp., Bridgeport. Each can of "Dr. West's" toothpaste (Waco Products Co.) is electronically tested for pressure.



Ready Now TO SOLVE

ANY ODOR PROBLEM!

We've just completed major expansion of our Perfume, Flavor and Aromatic Chemicals Division and now have unequalled capacity for solving industrial odor problems.

Our recently enlarged facilities include an increased compounding staff, a more fully equipped laboratory, and a comprehensive new library of deodorants, reodorants and masking agents custom-engineered for specific end-uses.

We invite you to submit your household preparations, insecticides, aerosols and other products which require odor masking. We will be glad to recommend compatible formulations suited to your individual needs. For prompt service address your inquiry to the Industrial Odor-mask Laboratory.

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Perfume, Flavor and Aromatic Chemicals Division

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Polishes made with EPOLENE "E" lead a tough life

...and love it

More and more formulators are turning to Epolene "E" for polishes that endure abuse but don't show it.

Epolene "E" is a low-molecular weight emulsifiable polyethylene wax. It is hard, tough, durable and compatible with most resins and waxes.

Incorporated into water-emulsion floor polishes, Epolene provides exceptional resistance to scuffing, dirt pick-up and water spotting, plus a natural "built-in" slip resistance. Epolene-based polishes exhibit good flow-out properties and high gloss...a gloss that actually increases following a normal period of wear and rebuffering. These polishes do not darken or discolor wood, ceramic or resilient flooring materials.

Epolene is manufactured to close specifications to insure uniform product quality and superior performance. Synthetic in origin, Epolene is available in a steady supply and at a stable price, offering economies not possible with costlier imported waxes such as carnauba. Its consistent high quality means you can standardize your formulations and procedures with complete confidence in batch-to-batch uniformity.

Epolene comes in small rice-size pellets that pour easily... melt quickly... blend readily.

Epolene is available also in a non-emulsifiable type—Epolene "N"—for use in paste polishes.

Ask your Eastman representative to show you how to make profitable use of Epolene's many advantages in your polishes. For samples and typical polish formulations, write today to: EASTMAN CHEMICAL PRODUCTS, INC., a subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; New York City; Framingham, Mass.; Cincinnati; Cleveland; Chicago; St. Louis; Houston.
West Coast: Wilson Meyer Co., San Francisco; Los Angeles; Portland; Salt Lake City; Seattle.



Epolene "E" means

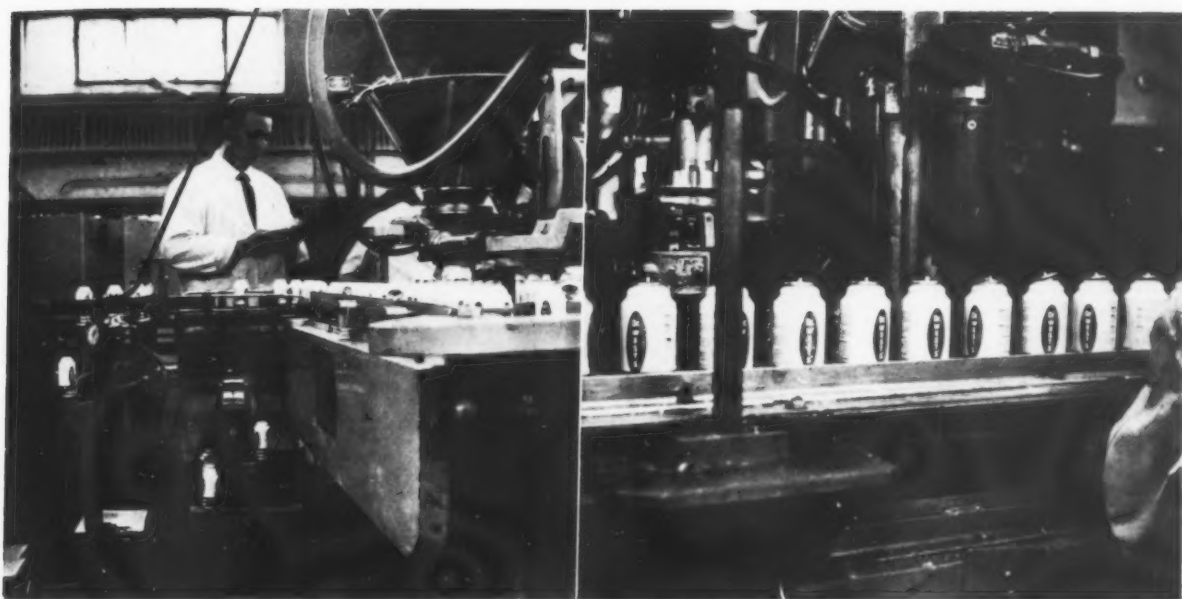
- high scuff resistance
- low dirt pick-up
- excellent slip resistance

Epolene

EASTMAN POLYETHYLENE WAXES



SOAP and CHEMICAL SPECIALTIES



Chief of quality control at Connecticut Chemical Research Corp. examines a can. Stainless tiler bowl on his left discharges toothpaste concentrate into six ounce cans. Picture on the right shows cans passing the valve crimper and the gasser.

Another difficulty inherent in a nitrogen propelled unit is the danger of accidental gas discharge. Suppose a can containing a viscous product is stored on an angle or on its side or is held in such a position prior to dispensing. The opening of the dip tube may not be covered by the product. With a highly viscous substance a few seconds will be required after the unit is returned to upright position before the opening is once more covered by the mass. Supposing the button is actuated while the opening is exposed. The result will be discharge of compressed gas. Pressure will be irrevocably lost, because there is no reserve of nitrogen dissolved in the product which might be released and serve as a replenishing reservoir. Until very recently gas loss in storage was supposed to be another bug-bear of the nitrogen pressure packer.

Valve Design

Some of the major hazards of nitrogen packaging have been minimized or removed by the development of modified valves expressly designed for this purpose. Precision Valve Corp. and Clayton Corp., St. Louis, Mo., are currently supplying valves actually used on

nitrogen propelled units in commercial production. Clayton makes the valve for Sifer's chocolate syrup mentioned earlier. Design of this unit calls for dispensing in an upside down position. Oil Equipment Laboratory, Elizabeth, N. J., and Risdom Manufacturing Co., Naugatuck, Conn., report that they have valves which are adaptable to use on nitrogen propelled units.

Precision claims that, since its original valve came into being, there have been no changes in basic design. Adaptation to the novel demands of a new propellant has been accomplished by modification of the dip tube and of the size of the orifices. The assembled valve comprises stem, body, and actuator orifices. By changing the correlation of their sizes a vast range of different valve actions can be achieved. In addition, the dip tube of Precision's valve for dispensing of nitrogen propelled viscous products has a considerably larger diameter than those for conventional aerosol dispensing. The tube is strongly curved to one side. The bottom of the tube is vertically aligned with a mark present on every valve cup. When the unit is assembled this mark will be used for orientation of the spout. In

other words, in the finished pressure package the end of the dip tube and the spout will be vertically aligned. Spouts of Precision's valves are hooked downwards like a water faucet. This is done partly for psychological reasons to induce the user to hold the can upright or tilted slightly forward when dispensing. (It works, we have tried it.) This arrangement insures the product covering the dip tube opening at the time of use.

According to Precision, nitrogen propelled viscous products can be dispensed efficiently not only in the form of a straight stream but also through metered dosage or drop dispensing valves. The difference in dosage when pressure declines in the course of use is claimed to be slight. Future application of nitrogen propellant to stream dispensing of non-viscous liquids is seen by Precision.

Precision Valve Corp. currently turns out about one and a half million valves a day on seven highly automated production lines. Most of these lines have an approximate capacity of 300 units per minute. One additional line is nearly complete and four more are in the process of being built. The firm has

(Turn to Page 114)

NOW—CHLOROTHENE LOWERS PROPELLANT COSTS IN HAIR SPRAYS

Dow solvent offers aerosol packagers two advantages—high solvent power and greater economy—in propellant systems.



CHLOROTHENE® (1,1,1-trichloroethane inhibited), Dow's newest solvent, has marked advantages as a vapor pressure depressant in hair spray aerosols. It offers greater economy, provides higher solvency for active ingredients and, in some cases, eliminates the need for additional solvents.

The low toxicity of Chlorothene, its high stability and low fire hazard (no flash or fire point) make it ideal not only for hair sprays but for many other products, such as spot removers, insecticides, and waterproofing formulations. As an added benefit, Chlorothene can be mixed with the concentrate to facilitate handling.

What about your aerosol products? You will be surprised at the difference Chlorothene will make—both in improved quality and in reduced cost. For additional information on uses, properties, costs and other facts about Chlorothene, contact THE DOW CHEMICAL COMPANY, Midland, Michigan, Department SO 1154E.

YOU CAN DEPEND ON

DOW



its own machine shop where equipment designed by its own engineers is built and maintained.

All components of the valve assembly are produced on the premises except gaskets, springs, valve cups, and brass stems. About 140 miles a day of polyethylene tubing are extruded to be cut into dip tubes. Precision makes its own molds. A large shop is devoted to the manufacture of plastic valve components by various processes. The valve bodies and stems are made of nylon; actuator buttons and spouts are of polyethylene, nylon, or cellulose acetate; protective caps are of cellulose acetate. The choice of material depends on the product and propellant characteristics and on the individual requirements of the customer.

A quality control laboratory takes care of statistical inspection of valve components and is responsible for checking raw material and parts deliveries. There is a customer service and development laboratory which is equipped with laboratory scale aerosol filling equipment. Spray characteristics are analyzed here, as are effect of products on valve parts and a number of other intricate problems essential to the efficient functioning of the final unit.

Precision Valve Corp. employs 350 people, works on a 24-hour a day basis, six days a week, seven in some departments. The company was founded only nine years ago by John G. Baessler, now president, Robert Abplanalp, vice president, and Frederick Lodes, who left the firm in 1956. Mr. Lodes is now head of his own enterprise, Lodes Aerosol Consultants, Inc., New York.

Precision started with five employees in a small machine shop in the Bronx section of New York City, where it turned out about 5,000 valves a day on hand assembling machines. When it had outgrown the machine shop, the firm moved to larger quarters on Saw Mill River Road, Yonkers, N. Y. In 1952, with 30 employees and a daily output of 35,000 valves, the

operation was transferred to its present home, a modern one story factory and office building on Nepperhan Avenue, Yonkers. Daily output is expected to reach several million units by the end of 1958.

Licensing arrangements for the manufacture of Precision valves in various European countries are administered by Precision Valve International, S.A., Zurich, Switzerland. The firm has agreements also with South American and Far Eastern licensees.

Precision had an exhibit at the charter meeting of the new European aerosol trade association (Aerosole I.G.) in Frankfurt, Germany, last month.

Antifreeze Quality Control

(From Page 101)

niques which will assist in the manufacture of the product. Each batch of product is analyzed in accordance with quality controls' recommendations to confirm its compliance with the specifications.

Control charts may be of assistance at this point. They are prepared by chronologically graphing laboratory results for each of the batches produced. From these graphs, the product variability or uniformity can be determined at a glance. Laboratory results on each of the individual properties are plotted on graphs on which the specification limits are shown by red lines. Any dot on the graph which does not fall between the red lines indicates a batch of material which does not meet specifications. We feel that the quality control department should anticipate trouble rather than work on emergencies, and we find control charts are quite valuable in accomplishing prevention. When one property on a finished antifreeze is slowly creeping toward the "red line", we are usually able to get to the source of the trouble and correct it before a batch of material is rejected. A rejected batch of product costs much more than a good one since it can only be dumped and, as a result, wasted or

considerable time and material must be devoted to its conversion into a satisfactory product.

In line with our functions devoted to getting the product to the market in good condition, quality control makes a study of packages and packaging. Many of our difficulties occur while the material is enroute to the customer. Considerable time and effort have therefore been devoted to improving the methods of loading the cars of antifreeze. In a recent study of this type, 33 cars of antifreeze were loaded by various methods to study the good and bad points of each type load. This enabled us to determine that a floating load was much better for our purposes. We were also able to select the best manner in which the packages should be banded in the car in order to take a maximum hump with the minimum of damage.

We have talked about some of the aspects of quality control work but there is one additional factor in every plant with which we must reckon. The fact that human beings are operating the equipment must be taken into account. The statistician cannot assign numbers to describe the manner in which the individuals will perform their jobs from day to day. We have a program, which is quite similar to that being used by the safety department, through which we try to reach the individual. We try to make and keep him as quality conscious as possible. We are now conducting a quality control contest in which the individuals are submitting slogans or other expressions concerned with quality. We hope that by this means the individual will give some thought to quality and the manner in which his job can improve it.

The present study shows that quality control is engaged in a wide range of activities. An effective program costs a lot of money and in any industry such expenditures must be justified. It is our experience that quality control is a justifiable activity in the type of business in which CSC is engaged.



Intimate...

The cosmetics chemist has learned from the motivational research psychologists that the most intimate emotional factors influence a woman's choice of cosmetics — and chief among them is scent.

That's why he attaches such great importance to fragrance . . . and so frequently uses Verona products as developers and extenders to bring out the latent brilliance of the compound.

Why not test some of the Verona specialties listed at the right. See how successfully they help you hit, and *hold* the piquant round notes and top notes that you want your products to have. We will gladly send samples on request.

A FEW VERONA SPECIALTIES

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VERONOL, an aldehyde.

CYCLAMAL, cyclamen aldehyde.

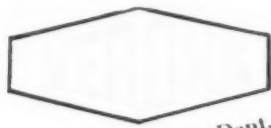
ROSANOL, an acetal.

PHENYL ACET ALDEHYDE PHENYL GLYCOL ACETAL

TERTIARY BUTYL DI METHYL CUMARIN

ORYCLON

FLOWER OIL WHITE LILAC.



Aromatics Dept.

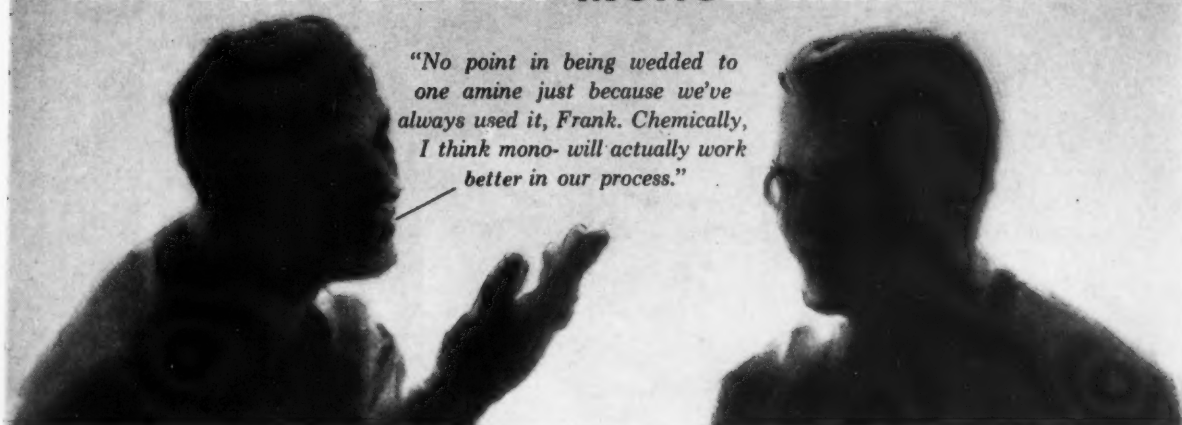
PRODUCTS BUILD SALES FOR

PRODUCTS

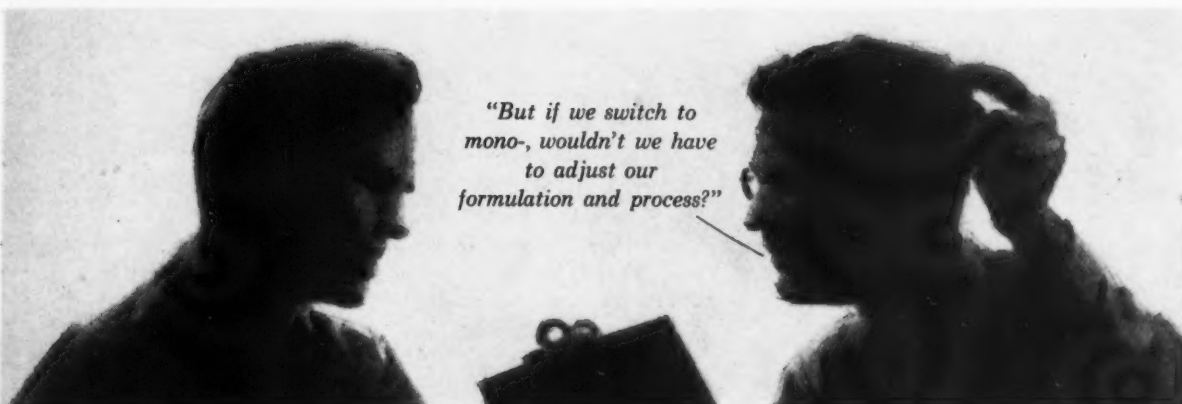
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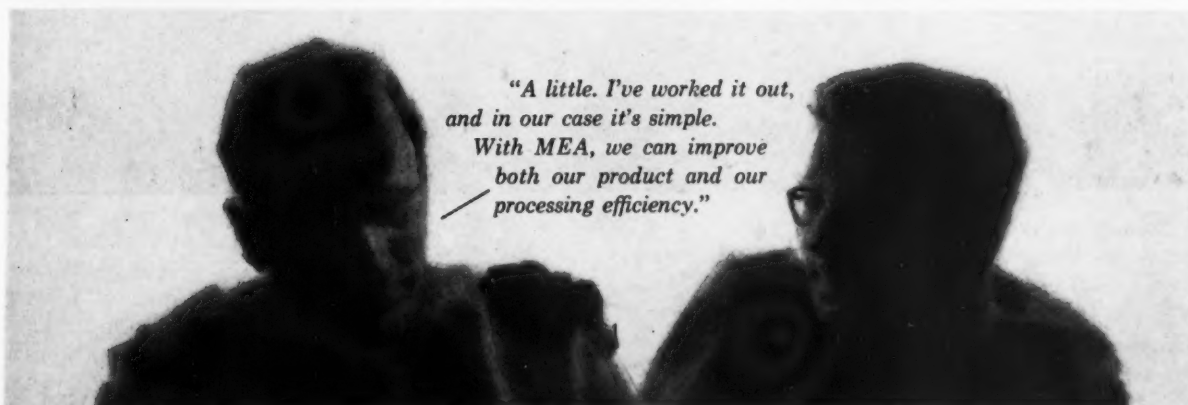
"WHY DON'T WE TRY **MONOETHANOLAMINE**?"



"No point in being wedded to one amine just because we've always used it, Frank. Chemically, I think mono- will actually work better in our process."



"But if we switch to mono-, wouldn't we have to adjust our formulation and process?"

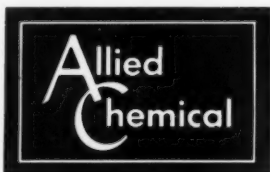


"A little. I've worked it out, and in our case it's simple. With MEA, we can improve both our product and our processing efficiency."

It won't hold for everybody, but in some applications where di- or triethanolamine is being used, there are positive advantages to be gained from switching to mono-. For example, MEA can frequently be used advantageously as the amine in amine soap emulsifiers for such products as cutting oils, weedicides, waxes and buffing compounds. In some instances total amine required is

reduced to the extent that cost is reduced. In some cases mixtures of MEA and TEA are better than either alone. MEA may improve performance while TEA maintains a lower pH.

If your product or process now utilizes DEA or TEA, it may pay you to evaluate MEA. Allied makes all three, and will give you technical suggestions that may help you shave costs, improve efficiency or make a better product. Write for any technical assistance you need.



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Blueprint for a successful

Insecticide Sales Contest

Highly successful 1957 chlordane "Show and Sell" contest boosts sales for formulators, dealers and distributors. Even "losers" happy. \$10,000 in prizes.

Based on the success of its 1957 "Show and Sell" sales promotion and contest on behalf of its insecticide chlordane, Velsicol Chemical Corp. is continuing the idea on a broader basis in 1958. How the 1957 contest operated, what the results were, who won, why and with what and, more important, how dealers reacted is told in the following article.

HAVE you ever heard of a sales incentive contest in which the losers wrote thank you letters? A contest in which many entrants "sold-out" so fast that they couldn't complete their entry? A contest that stimulated sales so much that some re-

tailers felt competing for a prize, on top of increased profits, would be gilding the lily? All of these things happened in my company's 1957 chlordane "Show and Sell" contest, which proved to be an outstanding success. To understand the reasons why, let's review the planning behind the contest.

You may have heard the story of the farmer who declined a book on agriculture because, he said, "I'm not farming as good as I know how to right now." Prior to the 1957 selling season, Velsicol

Chemical Corp. was in much the same position as the book salesman. We wanted to help chlordane formulators by increasing sales at the dealer level. We found, however, that many dealers were neglecting basic methods of product display and promotion, methods they used daily with other types of merchandise. A study of the field showed three ways of killing insecticide sales were prevalent. The first was to bury insecticides on an obscure shelf, where they remained until the labels faded. The second was to put insecticides in plain view, but leave them naked of feature signing or "how-to-use" information. The third was to put insecticides on the same shelf with plant foods, leaf sprays, weed killers, rat poisons, dog and cat repellents, and

By L. E. Carls

Advertising Manager
Velsicol Chemical Corp.
Chicago



Top display of East Bay Nursery, Berkeley, Calif., won a free trip to Paris for Mr. & Mrs. Gordon Courtright. In addition to winning the trip, worth \$1500, as the best display in the nation, Mr. Courtright won \$500 for winning first prize in Region I, which included the states of California, Oregon, Washington, Idaho, Montana and Wyoming. In lower photograph the Courtrights are shown emplaning on a United Airliner on the first leg of their trip to Paris.





other chemicals, and then dare the customers to find the product he needed.

We knew that chlordane was getting better-than-average support at the dealer level, because it is the one insecticide most often asked for by name. It has been in use longer than any similar product, and has

the longest record of proven effectiveness and safety. In both volume used and sales, it is the nation's number one insecticide for small package formulations. It is nationally advertised by Velsicol Chemical Corp., and by many of the formulators who use it.

In light of these facts, our

Fourth prize nationally went to Orr Seed Co., Norfolk, Va., for display shown at left below. It took first prize in Region IV, which included Alabama, Delaware, District of Columbia, Florida, Georgia, Kentucky, Maryland, Mississippi, North and South Carolina, Tennessee, Virginia and West Virginia. A national prize of

\$250 and regional award of \$500 went to R. S. Orr for this display. Richard Sanchez of Ferd Staffel Co., San Antonio, Tex., won fifth prize nationally for his display, which was judged the best in Region II (Arizona, Arkansas, Colorado, Kansas, Louisiana, Missouri, Nevada, New Mexico, Texas and Utah). Display won \$625.



Second prize winner nationally, and top display in Region V (New York and Pennsylvania), went to Treeland Garden Center, Lindenhurst, L. I., N. Y. Total prize money for this display was \$1,250; \$750 for being runner-up nationally and \$500 for winning regionally.

Display of Argilla & Boscacci, Redwood City, Calif., lower photograph, took third prize nationally and second prize in Region I. This netted owner Luke P. Argilla \$750.

concern was, "How can we help dealers realize more of chlordane's full sales potential?" The answer, obviously, was to encourage more effective product displays. Thus was born the idea of a contest that would be not only a sales incentive, but also a strong display incentive as well. In this way, more dealers could benefit from the contest, and the value of effective product display could be demonstrated.

What we didn't know, in the planning stage, was that we had a tiger by the tail. Results were phenomenal. There were over 2,000 entrants, and hundreds of qualified finalists. Requests for contest display kits poured in from all parts of the country. The eventual first national prize winner, East Bay Nursery of Berkeley, Calif., reported a sales increase of 60 per cent over the same period in 1956. Mid-City Nurseries of Vallejo, Calif., sold out their displays before a contest



In addition to cash prizes certificates of "excellence" and "merit" were awarded to chlordane contest participants. The complete and colorful kit of display material sent to every retailer who requested



a contest entry blank is shown above. Instructions suggesting uses of the kit were included.

picture could be obtained. Goldfarb's Arcadian Gardens, Paramus, N. J. (winner of a regional prize) reported, "The response to this display has been so terrific, we plan to continue it through the month of July."

These and other testimonials to the success of the contest were

entirely spontaneous. Space prevents quoting more than a few here and in other sections of this article, but there is now a new file in our office, bulging with voluntary evidence of sales increases obtained through the display of chlordane products. These came from all types of garden supply retailers.

An analysis of the winning entries shows that 14 were nurseries, seven farm supply stores, seven hardware stores, two specialty stores, and one a drug store.

The contest rules were simple. Any lawn and garden supply retailer could enter displaying at (Turn to Page 134)

Comments from Chlordane Contest Entrants

"Sales increase during contest period: 60%"
Berkeley, Calif.

"Both traffic and sales increased substantially during the contest period!"
Lindenhurst, L. I., N. Y.

"In checking our sales, we find a 30% increase over the same period in 1956."
Redwood City, Calif.

"Previously sales were limited because the public did not know chlordane's value but now our sales are steadily increasing."
Norfolk, Va.

"The display has been a huge success and really moved chlordane for us."
San Antonio, Tex.

"This display has increased sales to such an extent that I am continuing it on through the summer months. Most of the display was sold out by the end of three weeks."
Lakewood, Calif.

"Since this display was erected in the middle of our floor, our sales of chlordane products have increased very satisfactorily."
Flint, Mich.

"We have sold chlordane far beyond our wildest hopes. Thank you for a lesson in advertising."
Lancaster, O.

"Although the past few weeks are right in the middle of our regular chlordane season, our sales have gone way above last year's sales."
Mariana, Fla.

"This display was even more effective than we had anticipated, creating a great deal of interest from customers and passers-by."
St. Petersburg, Fla.

"We have doubled our sales of chlordane powder since this display was put up."
Charleston, S. C.

"Our retail sales of chlordane have doubled since this display was put up."
Philadelphia, Pa.

"We sold chlordane like mad, we had a hard time keeping a

minimum of five cases left to trim a window. Incidentally, the display sold tie-in items for us, too!"
Sharon, Pa.

"This has proven to be an excellent sales medium."
Yakima, Wash.

"The response to this display has been so terrific, we plan to continue it through the month of July."
Paramus, N. J.

"This display is really selling merchandise . . . chlordane is making more friends for me, as a retailer."
Lakeside, Calif.

"... our sales of chlordane have been terrific since putting in this window display. They were practically nothing up to this time."
San Diego, Calif.

"Sales have increased tremendously since this display was installed."
Fortuna, Calif.

"Last Sunday . . . we sold 3½ cases from this display."
Spokane, Wash.

"This has helped the department stores in particular, because, in the stores, the sales clerks really know little about garden care. The displays gave them sales ideas, and paid off."
North Hollywood, Calif.

"... much business has resulted from the window decorations."
San Luis Obispo, Calif.

"... displays sold out before a contest picture could be obtained."
Vallejo, Calif.

"I sold out all my chlordane and feel as if the display material really helped put it over."
Vista, Calif.

"The contest provided an interesting event in the year's business, but, more than this, it increased our already flourishing business on chlordane at least ten fold!"
Tulsa, Okla.

"We received good results from the sales of chlordane products during this display, better than we ever thought possible. Population of our city is only about 10,000 and we have sold in the past 12 months over 10,000 pounds of chlordane products."
Andalusia, Ala.

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A LITTLE PACKAGE WITH A LOT OF SHINE

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Petrolite C-700...	190 Min.	4 Max.	1½ Max.	Nil	Nil
B-Square 190 A...	190-195	2-7	1½ Max.	Nil	Nil
Petrolite C-1035...	195 Min.	2 Max.	1½ Max.	Nil	Nil
Petronauba C...	180 Min.	7 Max.	3 Max.	22-28	50-60
Petronauba D...	185 Min.	5 Max.	6 Max.	20-28	50-60
Petronauba H...	195 Min.	1-3	4 Max.	15-25	50-60
Petrolite C-15...	180 Min.	4-6	4-5	15-17	45-55
Petrolite C-23...	180 Min.	4-6	4-5	20-15	55-65
Petrolite C-36...	180 Min.	5-7	4-6	30-35	75-85
Petrolite PE-100...	195-200	2-3	4-6	15-20	45-55
Petrolite R-50...	190-200	2 Max.	4½ Max.	40-50	65-80
Petrolite P-20...	210-220	2 Max.	3 Max.	Nil	Nil

*If you don't see what you want, write us, stating the specifications and polish characteristics you require. We'll send you recommendations and/or samples. There's no obligation for this service.

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Today, U. S. and Canadian hospitals are fighting a fast-growing menace...the spread of staph-caused epidemics. Dust-borne bacteria present on apparently spotlessly clean hospital walls, floors, surgical instruments, eating utensils, uniforms and bedding spread staph infection to every phase of hospital care. Here is a ready-made market for whole new lines of formulated specialties.

Monsanto Santophen I stops staph. With a phenol coefficient of 200 against the staph micro-organism (highest of any phenol germicide), Santophen I is effective against both gram-positive

and gram-negative organisms and fungi.

Formulate with Santophen I for disinfectants for operating rooms, kitchens, laundries, rest rooms, floors, rugs, upholstery and air conditioning units. Applying Santophen I to wool-blanket rinse kills staph for the use period of the blanket. *Pine oil germicides have absolutely no killing power against staph.*

All-purpose germicide... Santophen I is virtually odor-free, has a low order of toxicity to humans and, with the absence of skin irritability, it gives you the ideal all-purpose germicide.

Increase your business now! Help hospitals fight staph with really effective disinfectants formulated with Monsanto Santophen I. Get the whole story, send coupon below for your chemical specialties bulletin on Santophen I.

Monsanto Report on Staph Control in Hospitals

New report, "CS-8," tells you how to boost the staph-killing power of your product. Gives formulation guidance for floor and wall cleaners, instrument cleaners, general disinfectants, aerosol or mist sprays, soaps and detergents. Answers your questions on use of Santophen I in specialties for institutional hygiene and general sanitation.

*Micrococcus pyogenes var. aureus, sometimes referred to as staphylococcus aureus.

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Clear Polymers for Floor Waxes

By **Alfred A. Kroner**

Kroner Laboratories, Inc.
New York City

FLOOR polishes that dry to glossy, nearly colorless films which do not yellow on aging are in growing demand. This demand has been created by the modern trend toward nearly white floor coverings of asphalt tile, linoleum, rubber, and vinyl plastics. Natural waxes and resins are not suitable raw materials for the formulation of clear, self-polishing water dispersions. The chemical industry has for some time supplied resins and waxes to replace or extend successfully some of the natural materials. (1,2)

The properties of carnauba wax and shellac have never been fully matched by any of today's replacement products. However, they cannot be formulated into clear polishes because of their color. The same applies to most emulsifiable synthetic waxes and to alkali soluble synthetic resins such as

polyester, maleic or dibasic acid modified resins and others, which are slightly yellow or amber in color.

Synthetic Waxes

Among currently available emulsifiable waxes suitable for incorporation in floor wax dispersions there is not one as white as paraffin wax or stearic acid. However, modern formulas usually call for only 20 per cent wax and 80 per cent resins. If the wax is used in these proportions its color will be less noticeable, especially in a thin film and provided the resins in the dispersion meet the requirement for water clear transparency.

Emulsifiable polyethylene waxes like "AC 629" and "Epolene E" (Semet-Solvay Petrochemical Division, Allied Chemical & Dye Corp., New York) are most suitable for clear floor polish formulations.

Their color is off white and, in addition, they exhibit other properties valuable for formulations containing large amounts of hard resins. "Duroxon J 324" (Dura Commodities, Inc., New York), an emulsifiable Fischer Tropsch wax can also be used in small percentages. The clarity of the final floor product will depend on the proportions of wax to resin and on the selection of almost colorless resins.

Synthetic Resins

A limited number of synthetic resins, emulsifiable or alkali soluble, have been developed, which dry into a water clear non-yellowing film. They are available in solid or in emulsion form and belong to three main types: acrylics, polyvinyls, and styrene polymers. (See Table I.)

Table I

Trade Name	Manufacturer	Solids	Specific gravity	pH	Particle size in microns	Appearance
Acrylics						
U-3040	UBS Chemical Corp., Cambridge, Mass.	40	1.08	7.0-7.5	very fine	milky
U-3045		40	1.04	7.0-7.5	very fine	milky
U-3050		40	1.049	7.2-8.0	very fine	milky
Rhoplex D70	Rohm & Haas Co., Philadelphia	40	....	6.2-7.0	0.1	milky
Rhoplex B74		38	....	3.0-4.0	0.1	cloudy
Neocryl A234U	Polyvinyl Chemicals, Inc., Peabody, Mass.	40	....	4.0-6.0	0.05-0.10	white-translucent
Vinyls						
Resyn 25-400	National Starch Products Inc., New York	35	....	7.2	0.05	milky
Elvalan	E. I. du Pont de Nemours & Co., Wilmington, Del.					solid
Vinac ASB 10	Colton Chemicals Co., Div. of Air Reduction Co., Cleveland					solid
Geon 652	B. F. Goodrich Chemical Co., Cleveland	49-51	1.24	6.0	0.2	white
PVP NP K90	Antara Chem. Sales Div., General Aniline & Film Corp., N. Y.	20				clear
Styrene Polymers						
U-2007	UBS Chemical Corp.	32	1.024	9-9.6	0.05	milky
Pliolite 165	Goodyear Tire & Rubber Co., Chemical Division, Akron, O.	48	1.02	10.5	...	milky

élan

n. (French, *élancer* to dart)
Ardor; eagerness for action; dash.
(Webster's New
International Dictionary,
2nd ed.)

An exclusive perfume compound— one of your own,
made with Rhodia's specialty bases or supra-refined aromatics— lends an
extra *élan* to your product. An *élan* that keeps your product moving off the
shelves of the market place. For aromatics, compounds, specialty bases or
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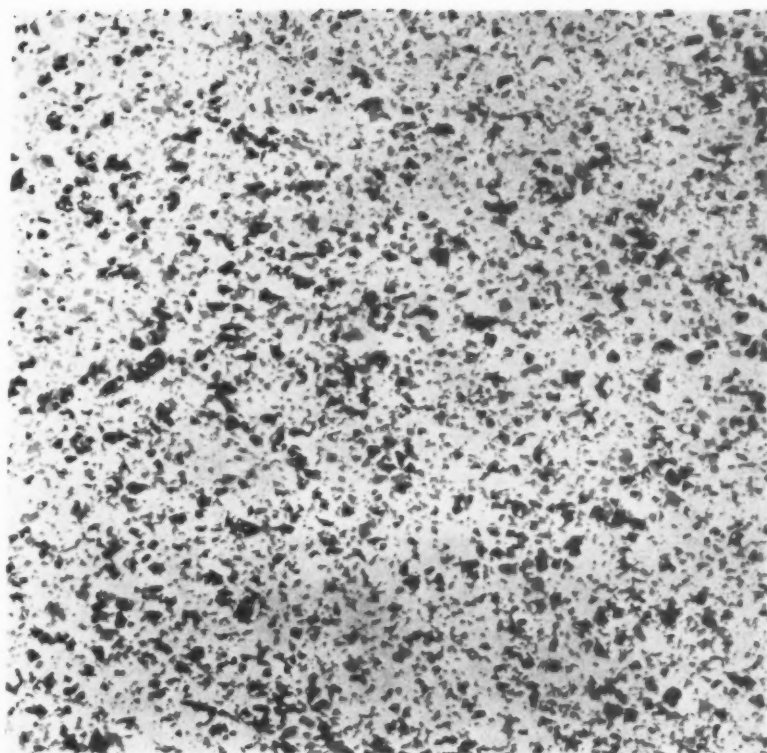
Philadelphia • Cincinnati • Chicago • Denver
Los Angeles • Montreal • Mexico City

All acrylic emulsions mentioned in Table I are of small micron size and compatible with other wax and resin dispersions. They form transparent films of high gloss, but differ in hardness and flexibility. Generally, acrylics form non-spotting coatings and improve water, scuff and slip resistance. Freeze-thaw and storage stability are good. Acrylic based films are easily removed by the usual alkaline floor wax removers.

"U-3040" and "U-3045" are modified acrylic polymers. They were developed as limited additives to formulations based on "Ubatol U-2003" polystyrene emulsion. Both polymers deposit highly water resistant, non-oxidizing films, clear and transparent, having only a faint amber cast. "U-3040" films are tough and hard; "U-3045" films are tough but more flexible. The latest acrylic "Ubatol" to appear on the market, "U-3050," deposits a film somewhere between the two mentioned above as far as flexibility goes, but is tougher and stronger than either of them. Lasting clarity, depth of gloss and reduced tendency to powder, (compared with very hard films) are exhibited by finishes based on this resin. Leveling should be controlled by a phosphate plasticizer, such as "KP 140" (Ohio-Apex Inc., Division, Food Machinery & Chemical Corp., Nitro, W. Va.)

"Rhoplex" acrylic polymer emulsions are on the acid side. Neutralized with alkali, they form water clear, non-yellowing films which differ in hardness. Volatility of the alkali and hardness of the waxes used in the formulation control the cohesion properties of the film. A higher percentage of a hard wax is required to accomplish a continuous film effect equal to that achieved by a smaller percentage of a soft wax. Proportions must be adjusted to the properties desired in the finished product.

A very hard, colorless covering is deposited by formulations based on "Neocryl A234U" acrylic polymer emulsion. No additional



Modern light terrazzo type vinyl flooring which calls for pale transparent floor finish.

plasticizers, which might affect vinyl tiles, are required. Being slightly acid, the emulsion must be adjusted to an alkaline pH with ammonia or volatile amines. This is necessary to achieve non-spotting properties and freeze/thaw stability. For higher gloss, a "Neocryl" film can be buffed, even in the case of a high resins/low wax content formulation. The film will not become brittle nor darken on aging.

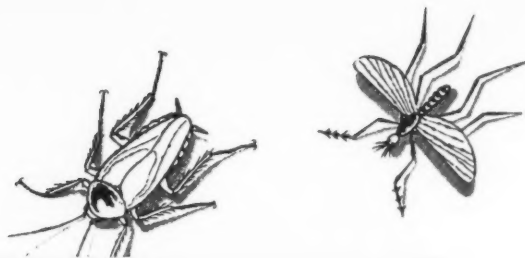
An anionic dispersion of acrylic as well as vinyl character is "Resyn 25-400" polyvinyl acetate acrylic copolymer. Diluted to 12.5 to 15 per cent solids the product can be blended with a wide variety of waxes and resins. Formulations based on "Resyn 25-400" form films which combine hardness, gloss, and high water resistance. They exhibit good scuff and mar resistance and have long wearing properties.

"Elvalan" and "Vinac ASB 10" are alkali soluble modified polyvinyl acetates in solid form. Solutions containing 10 to 15 per cent solids and adjusted with volatile alkalies, such as ammonia, yield films of good clarity, high gloss,

and good leveling properties. However, these films are not as water resistant as those formed by the resin emulsions mentioned above. Modified polyvinyl acetates are compatible with a wide range of wax emulsions and resin dispersions.

"Geon 652," a polyvinylchloride water dispersion dries at room temperature into a strong, flexible clear film. No plasticizer is required. Any wax dispersions to be blended with this latex should have approximately the same pH. A considerable difference in pH causes instability of the latex and could cause coagulation. Floor products formulated with "Geon 652" must be subjected to prolonged storage tests at 40 to 65° F. and at freezing temperatures.

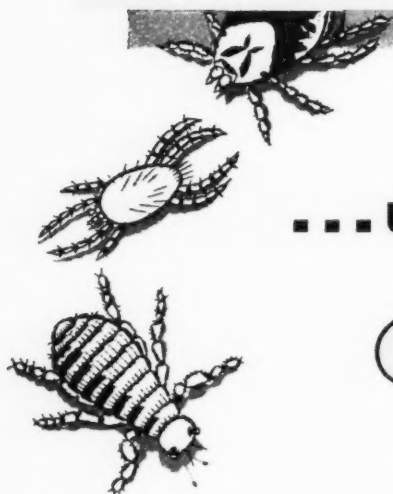
Polyvinylpyrrolidone (PVP) comes as an aqueous solution or as a white powder. It is known as a blood plasma extender and as a transparent film former in aerosol hair sprays. Formulated into self-polishing water emulsion polishes at the rate of two to three per cent (on solids content) PVP improves



**For low-cost—long-lasting,
dependable**

KILL

of public health pests



...use and recommend

dieldrin

Powerful dieldrin is proving its effectiveness in an ever-increasing number of public health pest control operations. That's why more and more pest control experts are including dieldrin in their eradication programs . . . they get sure kill with low dosage per treatment.

Dieldrin effectively controls mosquitoes, cockroaches, ticks, chiggers, fleas and many other annoying public health pests. No matter how they contact dieldrin, the kill is dependable. What's more, you can use powerful dieldrin both

indoors or outdoors, with equal effectiveness.

And it's easy to use. You can apply dieldrin as granules, dust or as a spray with conventional equipment. Its long residual action continues killing harmful and annoying insect pests long after application.

When you go up against public health pests, make certain you have the best weapon available. Use and recommend dieldrin. Complete technical information on dieldrin and its application is available. Write to:

SHELL CHEMICAL CORPORATION

AGRICULTURAL CHEMICAL SALES DIVISION
460 Park Avenue, New York 22, New York



properties and performance of the final product. PVP forms a protective film around the wax particles thus increasing stability and uniformity of the emulsion. By its film forming properties PVP hardens and reinforces the dried floor coating and increases luster and durability.

Styrene dispersions have been used in floor wax formulations for a number of years. Products based on "Ubatol U-2007" yield glossy, clear, transparent, non-yellowing floor finishes, which exhibit good water resistance and durability. This resin is compatible with acrylic emulsions and other resin or wax dispersions.

"Pliolite 165" is a styrene butadiene copolymer colloidal dispersion of good freeze-thaw and compounding stability. It forms a flexible, glossy clear film.

Summary

The compounder of transparent floor products has at his disposal a wide variety of acrylic, vinyl, and styrene resin dispersions, which form clear non yellowing films. Individual choice will be governed by the characteristics desired in the final product.

To obtain a film of adequate clarity the formulator should keep a few rules in mind: The use of darker colored resin or wax dispersions should be held to a minimum. Gradual darkening and discoloration of floor films may be caused by unsuitable alkalinizing

agents. When blending these clear resin dispersions with regular wax or resin emulsions, the polish formulator must realize that he is working with products of secret composition. Most of these dispersions have gone through extensive application research tests before they are offered to the industrial consumer. However, the floor wax compounder should regard the formulations suggested by the basic manufacturer merely as a guide. Practical testing is essential to developing successful formulations tailored to individual requirements and manufactured under individual conditions. These rules of thumb apply to the production of household floor care products as well as to rebuffable heavy duty products in all price ranges.

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1. A. A. Kroner, *Soap & Chemical Specialties*, Nov. 1955, pg. 163.
2. K. J. Wassermann, *Soap & Chemical Specialties*, Jan. 1956, pg. 127.

AOCS Short Course

(From Page 66)

Brook, N. J. Dinner speaker for the second day of the meeting will be F. J. Coughlin, Procter & Gamble Co., Cincinnati, who will talk on "Research on Syndets and Sewage by the Association of American Soap and Glycerine Producers."

The third day's program will be highlighted by papers on "Specialty Syndet Structures and Types," by Chapin Stevens, General Aniline & Film Corp., New

York; "Specialty Syndet Structures Application," by George E. Barker, Quaker Chemical Products Corp., Conshohocken, Pa.; "Glycerine Production," by A. K. Tosh, Colgate-Palmolive Co., Jersey City, N. J.; and "Glycerine Application," by E. Scott Pattison, Association of American Soap and Glycerine Producers, Inc.

On July 17 discussions will be held on "Saponification Stressing the Newer Methods," by Leo D. Jones, Pennsalt Chemicals Corp., Philadelphia; "Splitting of Fatty Acid," by O. J. Ackelsberg, E. F. Drew & Co., Boonton, N. J.; "Spray Drying," by John W. McCutcheon; and "Analytical Application Stressing the Newer Methods," by E. W. Blank and R. M. Kelley, Colgate-Palmolive Co., Jersey City, N. J. Morris Mattikow, Refining Unincorporated, New York, will serve as chairman. Dinner speaker will be H. E. Bramston-Cook, Oronite Chemical Co.

The final day's program, under the chairmanship of Jay C. Harris, Monsanto Chemical Co., Dayton, will feature papers on "Textile Uses," by George M. Gantz, Antara Chemicals Division of General Aniline & Film Corp., New York; "General Detergency," by Robert E. Wolfrom, Rohm & Haas Co., Philadelphia; "Cleaning in the Metal Processing Industry," by L. R. McCoy, Wyandotte Chemicals Corp., Wyandotte, Mich.; and "General Properties," by Mr. Harris.

H. E. Bramston-Cook



Frank Coughlin



Jay C. Harris





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Worry
in the
World!...

...when you specify

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QUALITY NO RUB FLOOR POLISHES

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**Certified Shellac
Assures
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- Longer shelf life
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- Higher gloss
- Better leveling
- Faster solubility

Moth Control Public Relations Program Under Way

THE long-discussed moth control public relations effort is at last a reality. Operating under the impressive title of Moth & Carpet Beetle Control Institute, the program is being directed by Maybruck Associates, Inc., a public relations firm with headquarters at 16 E. 41st St., New York City 17, the same address as the Institute.

Assuming the responsibility for this drive to persuade the housewife to buy more moth control products is Abraham H. Wiener, president of Standard Chlorine Chemical Co., S. Kearny, N. J. Standard is an important producer of paradichlorobenzene and naphthalene, major moth control chemical specialties. Mr. Wiener hopes eventually to enlist the support of other para and naphthalene producers and packers. The goal of the program is to double the amount of para and naphthalene used in

Partial view of Standard Chlorine Chemical Co.'s plant in S. Kearny, N. J.

controlling clothes moths and carpet beetles.

Mr. Wiener was one of the original proponents of the idea of an industry sponsored public relations program for more and better moth control. As originally envisaged such a scheme was to be administered under the aegis of the Chemical Specialties Manufacturers Association. In fact, it was at a CSMA meeting some five years ago that a plan for a public relations program was outlined. In the intervening years the subject has been discussed at countless committee meetings and eventually pigeon-holed.

The current program, operated out of the edifice of the Moth & Carpet Beetle Control Institute, is not a CSMA function, and is completely independent of the association.

Whereas the CSMA related moth control program anticipated including all types of products from aerosols through sprays, insecticides, para and naphthalene, MCBCI will stick pretty much to promoting para or naphthalene "moth crystals."

The theory underlying the moth control publicity campaign is built on the education of the housewife. She will be apprised of the extent of damage to her furnishings by moths and carpet beetles. Secondly, through the me-



Abraham H. Wiener, program sponsor, and head of Standard Chlorine Chemical Co., Kearny, N. J.

dium of the printed page, and by radio and television instructions and demonstrations, the housewife will be informed as to the correct method of applying moth and carpet beetle control products. Emphasis will be placed on using recommended dosages of chemicals. If, as a result of this educational campaign the housewife buys the moth control products she needs, and uses them in the recommended quantities, she will be protecting her valuables and sales of moth products will increase. Up until now too few housewives have been using moth proofers, and those that do use too little. A "Survey Concerning the Uses of and Attitudes toward Moth Preventives" prepared by Elmo Roper back in 1951 documents this fact rather thoroughly.

The traditional approach of preparing an article on moth damage for the editor of the women's page of a local newspaper or a "shelter" type magazine (such as *Better Homes and Gardens*) in spring or fall is being employed by the Moth and Carpet Beetle Control Institute. This type of publicity gets pretty generous treatment by editors because it is timely and, maybe more important, as with cleanliness, every one is for moth control.

One new public relations "wrinkle" being developed by the





And small wonder! For, Wyandotte Flo-chilled* Anhydrous Caustic Soda has K.O.'d that old bugaboo of caustic soda: caking and lumping in hot, humid weather. It's Flo-chilled to flow free and easy in your

automatic machinery *any* time of the year . . . and it's the same price as ordinary caustic! So hop on the bandwagon. Call your Wyandotte representative or distributor and order a supply, today! *TRADEMARK

**Look for this label
... and be SURE!**



Wyandotte CHEMICALS
MICHIGAN ALKALI DIVISION

WYANDOTTE CHEMICALS CORPORATION, WYANDOTTE, MICHIGAN
Offices in Principal Cities

PACING PROGRESS WITH CREATIVE CHEMISTRY

Moth & Carpet Beetle Control Institute is the "tie-in" angle. If successful, a public relations gimmick can be parlayed into an appearance on network television,—the *piece de resistance* toward which all p.r. men are working. The beauty of such a coup is that it may cost nothing.

Thus, as step number one toward this goal, the fledgling moth control promotional efforts of Mr. Wiener and Maybruck Associates is a "cross-promotion" involving the Institute and four nationally known manufacturers.

The four companies which have agreed to cooperate with the Institute in the "cross-promotion" aimed at selling more moth products are: Aluminum Corporation of America; Reynolds Metals Co., Kaiser Aluminum & Chemical Sales, Inc., and Minnesota Mining & Manufacturing Co. The first three named companies produce aluminum foil sheets, the sale of which they are promoting to the housewife via the major media of communication: television, radio and newspapers.

Areas of cooperation variously include:

- 1.) Preparation and distribution of special television kits to local outlets for home shows;
- 2.) TV commercial time on the participating company programs showing how best to protect garments from moth damage;
- 3.) News stories issued by the public relations departments of participating companies encouraging the proper use of moth products;
- 4.) Preparation of feature articles for national magazines;
- 5.) In-store and window displays tying-in the foil film and masking tape with moth products sold in drug and food stores.

The obvious reason, of course, why producers of foil sheets are interested in going along with a cooperative program involving moth control products is that it can increase the sale of their products. Radio and television commercials will describe the value of wrapping

garments, rugs, etc. in aluminum foil to prevent moth damage during storage. In the course of such commercials, moth crystals will be shown or described as they are sprinkled among the garments. Finally, the packages will be sealed with a masking tape such as that made by Minnesota Mining & Manufacturing Co.

Already on newsstands is a story and pictures of this new wrinkle in moth proofing, using foil. It was placed with one of the national press associations which services some 1700 newspapers. The story, developed by Minnesota Mining and Manufacturing is expected to break shortly. In this case the cost of the photographs accompanying the article were shared by Minnesota Mining and the Moth & Carpet Beetle Control Institute.


Another idea developed for the program is a television kit which Alcoa is employing. The kit consists of a one pound container of moth crystals, a roll of cellophane tape, a supply of Alcoa foil and a jumbo size post card provided by the Moth & Carpet Beetle Control Institute. Along with suggestions as to how the station can do a demonstration on its home show, the kit was sent to 480 television outlets in the U.S. As an additional incentive, gifts are sent with the kit for the moth proofing demonstration. These may be kept by the person doing the demonstration.

The post card (8 1/4 x 5 1/2 inches) lists suggestions on how to use moth crystals. The cards are available to television viewers on request from the local station.

In addition to the above "cross-promotions," the Institute has placed stories for use in late spring and summer with national magazines having a circulation in excess of 12 million.

Plans are under consideration for working out tie-in publicity and promotion efforts with such leading industry groups as the Wool Bureau, the Millinery Insti-

(Turn to Page 135)




Sell Your Detergent's Economy *in Action*

You know the sales power of product demonstrations...now you can prove, in quick demonstration, the economical use of your liquid detergent...and make sales repeat with the unsurpassed DEMA Proportioner.

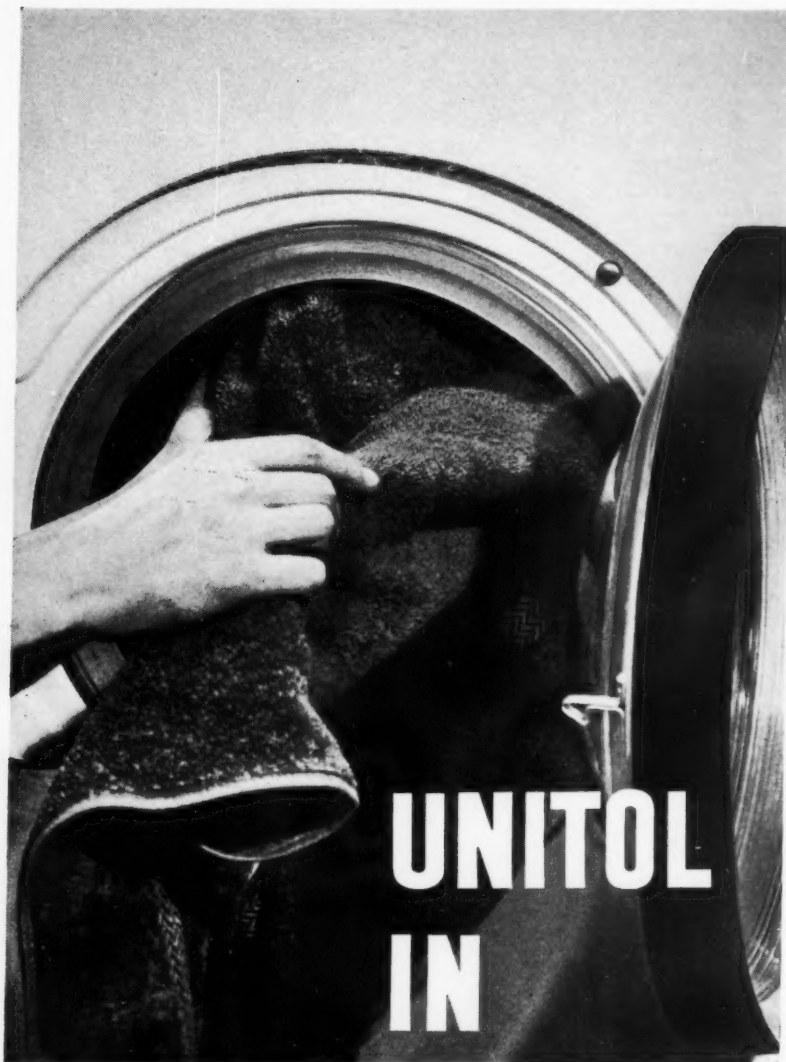
Promote the plus of DEMA control with your detergent and you are presenting a package hard to resist.

DEMA means convenient, constant control of liquid detergents; it backs up your sales presentation with real action.

For complete details, write today to...



DEMA ENGINEERING COMPANY
Designers and Manufacturers of Automatic Dispensing Devices
702 E. Big Bend Blvd., St. Louis 22, Mo.



UNITOL IN DETERGENTS

**helps
keep clothes
clean**

UNITOL tall oil goes into more quality products today than ever before. For example, it is proving an important ingredient in the manufacture of economical surfactants for household detergents.

Investigate the possibilities of cutting your costs with *UNITOL* products. Write for details, samples and prices.



Chemical Sales Division
UNION BAG-CAMP PAPER
CORPORATION
233 Broadway, New York 7, N. Y.

Insecticide Contest

(From Page 119)

least five cases of chlordane, filling out an entry blank, and furnishing a picture of his display. Displays had to be maintained for at least two weeks consecutively between May 1st and June 30th. The country was divided into six regions, chosen to equalize the number of store units and area sales volume.

Five prizes were awarded in each region, in the amounts of \$500, \$250, \$125, \$75 and \$50. Regional winners were eligible for the grand national prize of a \$1,500 seven-day trip to Paris for two, and four other national prizes of \$750, \$500, \$250 and \$125. Additional prizes and bonuses were awarded to distributor and formulator salesmen who helped contest entrants set-up displays. In total, the prize money amounted to over \$10,000.00!

The contest was announced through trade advertising and a large mailing brochure. The news was also passed along by distributors and formulators who cooperated in the contest. Every entrant received a free kit of chlordane promotional aids that included an attractive mobile, a display center piece (six feet long), window streamers, and colorful insect control booklets. A second copy of the announcement brochure, which contained display tips, was also included in the kit. Many of the entrants went a step beyond the contest requirements, and used newspaper advertising or mailing pieces to promote their displays. The added effectiveness of this activity is underscored by the experience of Gulf Beach Paint and Hardware, St. Petersburg, Fla. This firm featured chlordane in newspaper advertising and in 2,500 mailings of its regular monthly bulletin, plus a special mailing during the contest period. The result of this unified promotion was a 120 per cent increase in sales for the first three weeks of June, 1957, over sales for the entire month of June, 1956.

This was truly one contest in which there were no losers. Even those who failed to send in photographs and return their entry blanks were money ahead, because results show that wherever a chlor-dane display went in, sales went up. Distributors and formulators, of course, benefited from increased dealer sales, making the contest a success at all levels.

Moth Program (From Page 133)

tute, as well as producers of wool blends.

As Mr. Wiener points out, "the program is still in its infancy. We are just beginning our program of consumer education. Our efforts will be expanded later."

Blumenthal in New Post

J. H. Blumenthal has joined van Ameringen-Haebler, Inc., New York, as a group leader in the research department. It was announced recently. He will be concerned with new aromatic chemical compounds and processes. He previously was associated with Air Reduction Co., New York, where he was in charge of exploratory research.

New "Phlo" Dispenser

Chemical Corp., 54 Waltham Ave., Springfield 9, Mass., recently introduced a new push-button dispenser for waterless cleaners. Trade-named "Phlo," the unit is equipped with a disposable refill container and a dripless spout. The dispenser body is of aluminum construction.



UNITOL IN WAXES

**helps
protect
surfaces**

Many manufacturers are profitably using *UNITOL* as an emulsifier in high quality waxes and polishes.

Today, the end use applications for *UNITOL* tall oil products are greater than ever. Investigate the cost-saving advantages of using *UNITOL* in your process. Write for complete information, samples and prices.



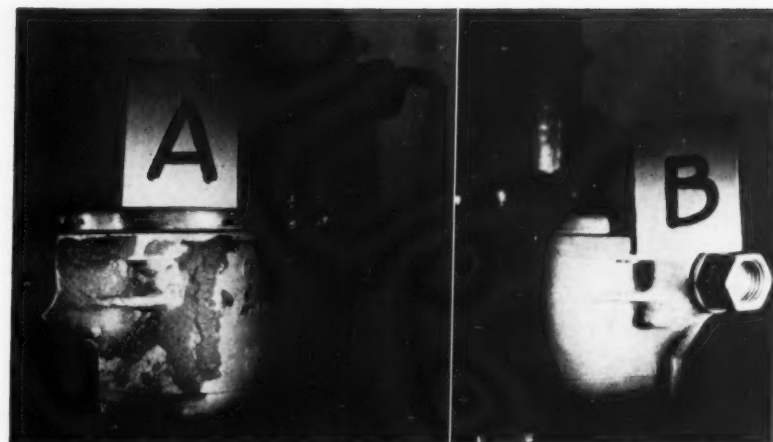
Chemical Sales Division
**UNION BAG-CAMP PAPER
CORPORATION**
233 Broadway, New York 7, N. Y.

Automotive Parts Cleaners

(From Page 60)

ject into the aqueous phase during the cleaning operation; therefore, it is desirable that the cleaner be adequately inhibited in both aqueous and solvent phases.

Some cleaners with an alkaline pH, contrary to expectation, were not detrimental to aluminum if suitably inhibited. Others actually caused severe pitting of aluminum after prolonged contact. Cleaners containing high concentrations of chlorinated solvents will undergo pH changes via hydrolysis with consequent acid formation. Striking evidence of this can be found at the liquid air interface in the containers. Rust formation is accelerated at stress areas (seal junctures) because of the presence of traces of the chlorinated solvent and water vapor condensation. Hydrolysis occurs more rapidly in the vapor phase due to the large surface



Close-up before and after of a carburetor section following cleaning and rinsing operation. Visual examinations of cleaned parts aid in rating cleaner efficiency.

area of exposed metal, poorer inhibition efficiency of vapor phase inhibitors (if present) and a higher ratio of chlorinated vapor to water vapor as compared with the liquid phases.

Suitable liquid and vapor phase inhibitors for the metals encountered in cleaning and adequate buffering action to resist or minimize pH change are major prob-

lems which confront the formulator. Corrosive cleaners may cause functional damage to components; therefore, considerable thought should be given to this phase of development.

Projection of present practices and reviewing the current availability of new raw materials suggest the possibility of the following future developments:

DEPTH OF GLOSS

An important floor wax sales advantage is yours with proven copolymer emulsions from Polyvinyl Chemicals!

NEOCRYL A234U is well known for its unmatched "film clarity". In your floor wax formulations, it can help bring out the optimum "depth of gloss", imparting a deep rich lustre to the finished floor. NEOCRYL A234U, largest selling acrylic polymer for floor waxes, also gives you extremely light colored formulations, one of today's hardest hitting sales features.

NEOREZ ST: A new polystyrene emulsion which you will find worth your while to examine. Lower plasticizer requirements mean superior soil resistance and less dirt pickup. Good balance between water resistance and removability; shows least whitening on damp mopping. Samples and personal technical assistance on the use of NEOCRYL and NEOREZ polymers gladly supplied.

POLYVINYL CHEMICALS, INC.

26 HOWLEY STREET • PEABODY, MASSACHUSETTS

1. Wider use of non-ionic emulsifiers to speed cleaning action;
2. Improved oil, water and vapor phase inhibitors and acid scavengers;
3. Improved balance formulations to produce uniform evaporation rates which will extend cleaner use life;
4. Investigation and application of odor masking agents;
5. Application of ultrasonic equipment for parts cleaning and investigating the physical types best suited for the technique (e.g., diphase, homogeneous, or emulsion cleaners);
6. Application of water base, non-cresylic, non-chlorinated carbon removers.

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1. Schoenholtz, D. and Berkeley, B., *Soap & Chemical Specialties* 32, No. 9, 47 (1956)
2. Snedecor, G. W. and Cochran, W. G., "Statistical Methods", pp. 91, 96, Iowa State College Press, Iowa (1956)

Soap Stamping

(From Page 56)

ute. This fantastic output was made possible by belt feeding the blanks to the operator and belt removal of the stamped tablets and by so organizing the labor that only one hour out of three is allocated to each operator per machine. This shows what can be done.

The efficiency of power driven and fully automatic machines varies greatly too. Some factories maintain a 93 per cent efficiency while others with the same machine get only around 70 per cent. Actually no fully automatic machine, working on rectangular tablets, should give less than 90 per cent efficiency. This means that a machine set to do 100 strokes a minute should be capable of producing not less than 90 tablets good enough to pack.

Pin die automatic machines are not so fast working or so efficient. A very good performance would be 80 per cent on a machine doing 60 strokes a minute.

In more recent years stampers operated by compressed air have been introduced to the market.

These have proved probably cheaper to run and install than other power presses and to be satisfactory in use. They offer no other advantages, and generally they are merely used in place of hand operated machines, i.e. slow moving machines.

— ★ —

New Washability Tester

A new model washability tester is available from Gardner Laboratory, Inc., Bethesda, Md. The instrument is designed for eval-

uation of washability, scrubability, cleansability, removability and abrasion resistance of paints, varnishes, lacquers, linoleum, waxes, and other surfaces. "Model M-105" washability machines can also be used to determine ease of application and gloss of waxes and furniture polishes; effectiveness and ease of application of metal cleaning polishes; detergent power of soaps. *Gardner Newsletter*, vol. 5, No. 46, gives details on the devices.



**offers
over 30 years'
experience to
the pesticide
industry
through—**

Doc Weed and his staff

Powco Leadership

- First to synergize pyrethrum.
- One of the first to provide standardized pyrethrum products.
- One of the first to provide rotenone.
- One of the first to provide the services of a bio-chemical testing laboratory.
- Among the first to pioneer DDT household formulations.
- One of the pioneers in the aerosol field.

The purchase of Powco Brand insecticides includes more than just a container of chemical—much more. It includes a pinpoint answer to the customer's problem, an answer provided by the Powco staff of experts headed by Dr. Alfred Weed. Such service can only come from experience gained over years of developmental work. Therefore, whether it's an order or advice you seek, call Powco for immediate attention to your needs.

Formulations: Allethrin, Pyrethrum, Sesamin, Piperonyl Butoxide, DDT, Perthane, Chlordane, Strobane and other approved toxicants and synergists.

Household and Industrial Concentrates: Pyrethrum Extract, Pyrin, DDT, Lindane, Chlordane, Dieldrin, Malathion, and other approved toxicants both standard and custom-made.

Write today for further information

6263



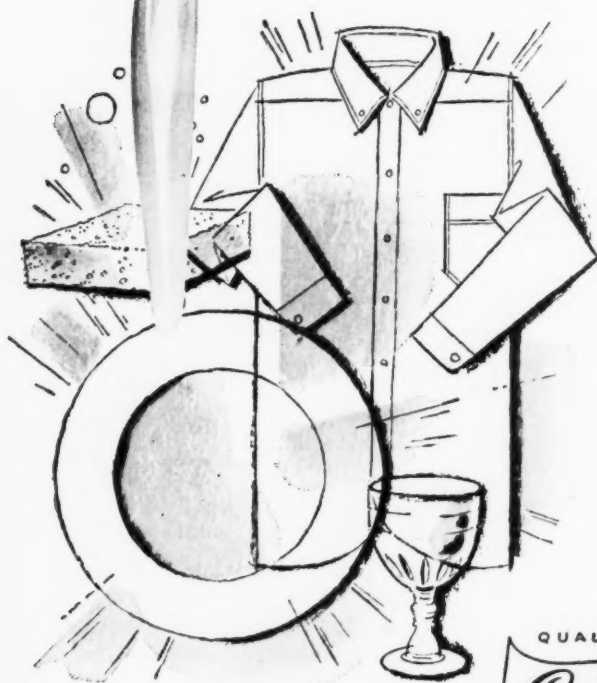
OLIN MATHIESON CHEMICAL CORPORATION
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NEW YORK, N. Y. • CHICAGO, ILL. • EAST POINT, GA.
FRESNO, CALIF. • DENVER, COLO. • HOUSTON, TEX.



FLUID FLOW CANS BY CONTINENTAL BEST FOR *Detergents,*

*ammonia and
other household products*



Whether your product is a detergent or some other household product, you'll clean up more sales when you give it the customer-pleasing advantages of Continental Fluid Flow cans. Look at these features! **No drip nozzle** of polyethylene for free flow and exact dripless cutoff.

Wrap around lithography: Solderless construction leaves entire can (dome top, too) free for decoration with Continental's superb lithography.

Matchless beauty that lasts: Protected by a special varnish that prevents marring of lithography during display.

Unsurpassed product protection insured by specially developed enamel linings.

Colored nozzles to match or contrast with can design for added sales appeal.

Get the best can for your household products, *plus* Continental research and engineering service. Call Continental today.



WIDEST RANGE OF SIZES!

Continental Fluid Flow cans are available in the widest range of sizes, every size you want to satisfy your customer's needs, from 12 oz. to one-half gal.

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4
Canadian Division: 5595 Pare St., Montreal, Que.

Packaging

AEROSOLS • LIQUIDS • PASTES • POWDERS

George S. Babcock, vice-president and general manager of the closure and plastics division of Owens-Illinois Glass Co., Toledo, holds two of new rigid plastic containers soon to be made by O-I. The company will begin production this spring on new containers made from high-density polyethylene.

**Automotive
Chemicals
Cleaners
Detergents
Deodorants
Disinfectants
Floor Products
Insecticides
Laundry Bleach
Metal Cleaners
Moth Products
Polishes
Shampoos
Shave Products
Soaps
Liquid Starch
Toiletries
and other
Chemical Specialties**

*A market for over 28
billion packages annually*



AEROSOL Packaging...

TO FIT **YOUR*** PRODUCT



PRODUCTION VERSATILITY—Our facilities will handle oil and water base, liquid and foam products, of all types, *in small or large quantities*. No minimum run required and no maximum limit! *Rigid quality control* is maintained on all production regardless of the size of your run. All types of cans and valves are available to you from stocks kept on hand. Complete laboratory service lending itself to *dependable production* is a must for your aerosol or pressurized product needs and is also part of our complete service rendered by personnel trained in aerosol research. For information, consultation, or estimates, write or phone one of the countries first aerosol fillers — CHASE PRODUCTS COMPANY •

INCREASED PLANT FACILITIES—Our new 30,000 sq. ft. plant is centrally located for ideal distribution, with both rail and truck facilities. We offer warehousing, drop shipping in bulk lots, direct pick up and routing by major national truck lines. Outer Belt Line rail service connecting every railroad in the Chicago area. All these make for faster, more efficient, more economical receiving, handling, and delivery of your merchandise.

CHASE PRODUCTS COMPANY • MAYWOOD, ILLINOIS



When your success is at their fingertips

RISDON VALVE QUALITY IS VITAL INSURANCE

The payoff point for all the time and money invested in your aerosol product is at the fingertips of the user. That is where repeat sales are made or lost.

When your customer pushes the actuator, the performance-insuring quality of a Risdon valve becomes vital. And nothing less than Risdon quality gives full assurance of customer-pleasing results over the entire life of the package. An inferior valve can turn out to be your most expensive "bargain".

Risdon quality... performance-proven on many millions of packages... is the result of extensive scientific research and development. It is zealously guarded at every stage of valve manufacture by Risdon's uncompromising quality control.

Most *leading* aerosol packagers keep their success secure by using only Risdon valves to dispense their products.

Contact Risdon for specific information on the valve for your product.

Write For Free Booklets On RISDON Valves

FOR Pressurized Products Packaged in Glass, Metal or Plastic Containers.

DISPENSING Conventional Aerosols, 3-Phase Products, Alcohol Base Products, Water-Base Products, Foam Products, Powder Sprays, Metered Sprays, Ultra-Low Pressure Applications, Products Containing Propellant Emulsions or Dispersions, etc.



THE RISDON MANUFACTURING CO.
Valve Division • Naugatuck, Conn.



A **PACKAGING TEAM** NEEDS

One of the most important factors in the success of a product is its package. That's why many companies are making packaging decisions *team* decisions. But to make your packaging team complete, it needs an outside viewpoint. It needs an Anchor Man...the man from Anchor Hocking!

He is a glass packaging specialist, backed by

capable package engineering and research technicians, modern laboratory and manufacturing facilities. He can strengthen your packaging team in evaluating and selecting glass containers and colors that will do the best job for you, your retailers and consumers. He can also help your team in the selection of a closure that will



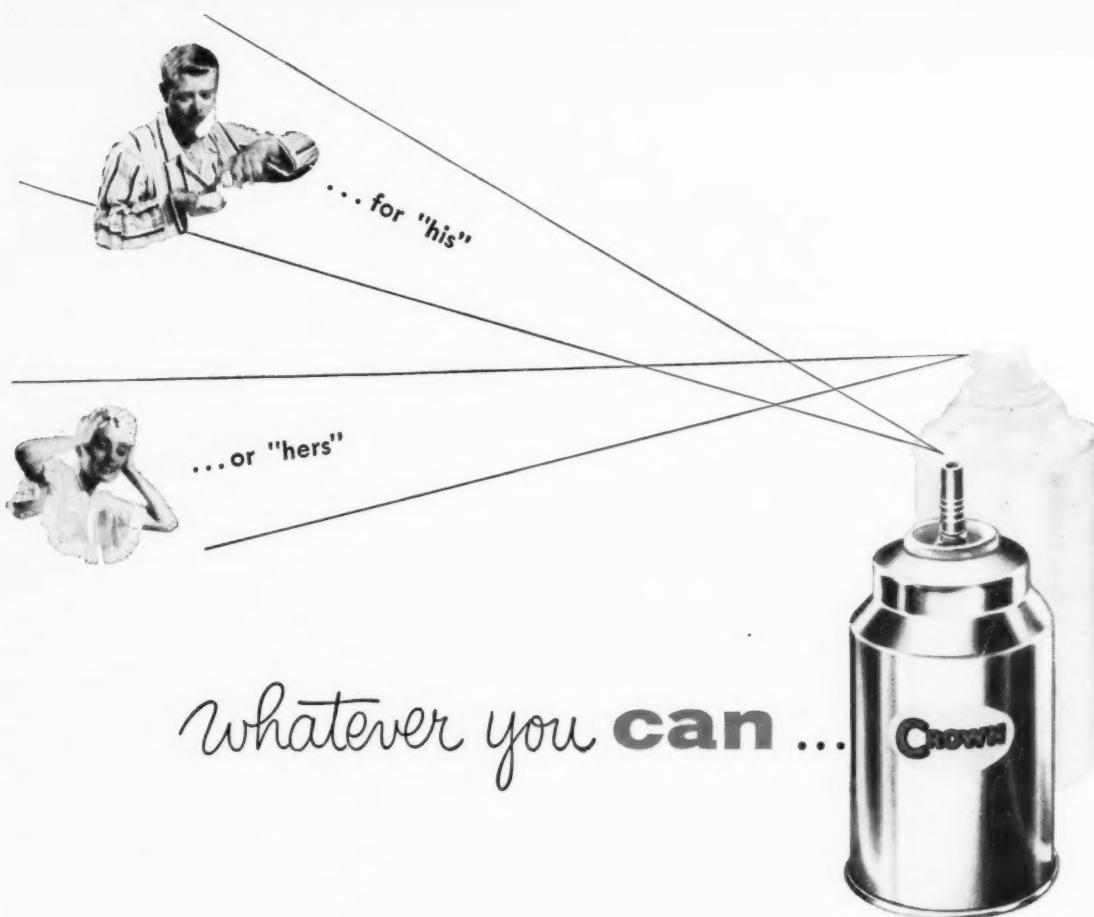
AN ANCHOR MAN!

most completely and economically satisfy your diverse and specialized requirements.

Your Anchor Man is a good man to know ... a good man to have on your packaging team. Contact him! Anchor Hocking Glass Corporation, Lancaster, Ohio. Branch offices in all principal cities.

ANCHOR HOCKING

Glass Containers
and Closures



Whatever you **can** ...

can with CROWN Spraitainers

For pressurized shaving creams or hair-set lotions—for literally hundreds of cosmetics or personal products for "his" or "her" use—*can* with CROWN Spraitainers.

Spraitainers offer the marketer many advantages. Metal guarantees no breakage. Seamless construction is modern design. Full wrap-around lithography lends beauty and high fashion. This means that Spraitainers actually give your packaged products *extra* sales appeal for faster turnover. Your product deserves the best—call on CROWN for Spraitainers . . . seamless or fabricated.

Write for your copy of CROWN's new 3rd edition—"GUIDE TO PRESSURE PACKAGING." Crown Cork & Seal Company, Inc., Can Division, 9372 Ashton Road, Philadelphia 36, Pa.

whatever you can . . . call on

CROWN

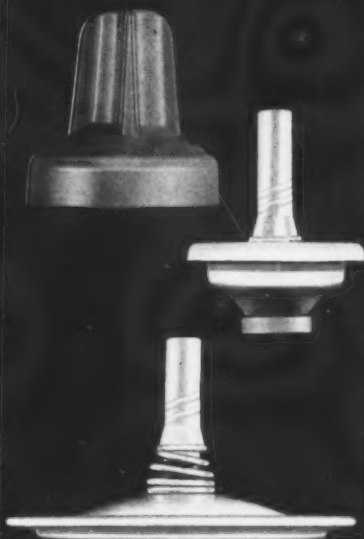
CROWN CORK & SEAL COMPANY, INC.

MANUFACTURERS OF CLOSURES, CONTAINERS and MACHINERY

Clayton

"NOZZLE DOWN"

dispensing valves and covers



ALL VALVES AVAILABLE WITH COLOR-ENAMELED MOUNTING CUPS, HIGHEST QUALITY, CHEMICAL AND CORROSION-RESISTANT INTERIOR COATINGS!



DIP TUBE VALVE

The best available! Dispenses with forward or downward push. Gasses and dispenses uniformly. Pressure fills at highest speeds. No metal valve parts exposed to product.

Clayton

CORPORATION

NATURALLY BETTER FOR ALL FOAM, CREAM AND LIQUID PRODUCTS...

ALSO MANY SPRAY PRODUCTS!

Better in use—Clayton NOZZLE DOWN Valves dispense pressure-propelled products in the most natural and efficient way . . . pointing the product where you want it, eliminating misses and messes! Functionally dependable, they never clog . . . always stay intact. Flow rates to meet specific product requirements.

Better in production—they assure uniform gassing . . . pressure-fill at highest speeds with all types of propellants including nitrogen. Completely assembled—no parts to put together in your plant!

Better in shipment—components can't come apart! Your product stays safe with the Patented Screw Valve Covers . . .

THE MOST POSITIVE-ACTION COVERS ON THE MARKET!

Better in every respect—for shaving creams, hand creams, shampoos, suntan creams, rug cleaners, upholstery cleaners, etc . . . Clayton NOZZLE DOWN Valves are the most accepted, preferred and consistently bought valves for foam products . . . the most effective for all cream and liquid products and many spray products.

**TIME TESTED AND PROVED
ON HUNDREDS OF MILLIONS OF CONTAINERS!**



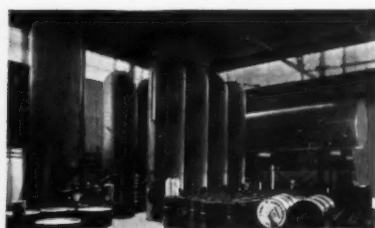
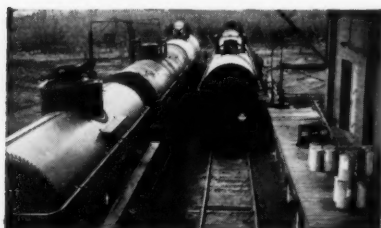
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WRITE, PHONE OR WIRE US FOR COMPLETE DETAILS!



...and then some!

50,000 square feet, as a matter of fact, in which to meet your liquid or aerosol filling requirements. Besides ample facilities for handling your bulk ingredients, we have extensive warehousing space for the storage of your products after packaging. When shipments are to be made, our personnel and equipment

are ready to move large or small orders in a hurry... and of course, we're always glad to handle drop shipping. Direct railroad sidings and truck service at our door permits our plant to serve as your warehouse... a central distributing point... saving you time... and money.



For details about our complete services in contract filling (liquid or aerosol), write, 'phone or wire...

PETERSON
Filling and Packaging Co.
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NATURALLY BETTER FOR ALL FOOD PRODUCTS...

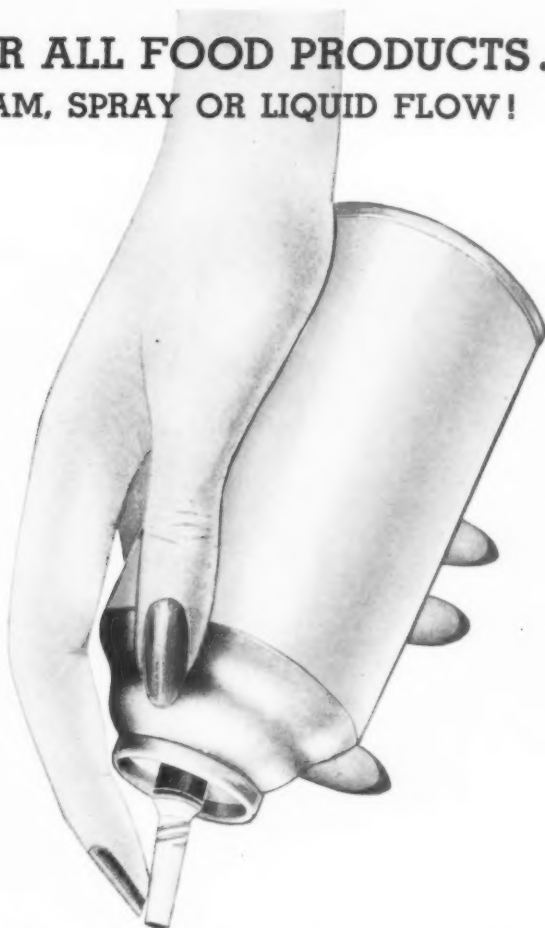
PRESSURE-PROPELLED FOAM, SPRAY OR LIQUID FLOW!

Getting
right
down
to it...

The Clayton NOZZLE DOWN Valve serves your pressure-propelled product right . . . right down where you want it . . . employing the most natural and effective method of food dispensing.

So naturally it's the food dispensing valve preferred and used by more men, women and children than any food-type valve in America! And naturally more and more manufacturers are relying on Clayton's vast knowledge and experience for help in developing food aerosols . . . are adopting the non-clogging, smooth-dispensing valve TIME TESTED AND PROVED ON HUNDREDS OF MILLIONS OF CONTAINERS!

With the ever-increasing trend toward pressure-propelled foods . . . and the need for controlled flow rates to meet specific product requirements . . . countless Clayton NOZZLE DOWN dispensing valves will be used for flavorings, sauces, condiments, salad dressings, spreads, frostings, toppings, shortenings, syrups . . .



FOR ANY TYPE OF FOOD REQUIRING FOAM, SPRAY OR LIQUID FLOW!



CLAYTON VALVES ARE CHEMICAL AND CORROSION-RESISTANT!

All Clayton Nozzle Down and Dip Tube Valves are available with color-enameled mounting cups. Highest quality chemical and corrosion-resistant interior coatings. All Clayton valves pressure-fill at highest speeds, assure uniform gassing and dispensing. All stay intact in shipment and use. Nozzle Down Valves are completely assembled.



Clayton
CORPORATION

4205 FOREST PARK BOULEVARD
SAINT LOUIS 8, MISSOURI
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(case history—Eli Lilly Company)

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stainless
steel
drum
can
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If you process or store products that require absolute sanitation, you'll be interested in how Eli Lilly and Company, Indianapolis, Indiana — one of the world's leading producers of pharmaceuticals—uses Inland stainless steel shipping drums.

Lilly puts Inland all-welded stainless steel shipping drums through a rigid, high-pressure sterilizing process, and then fills them with antibiotics and seals them. Once sealed, the drums are depended upon to keep their precious cargo "Operating Room" sterile—in shipment and in storage.

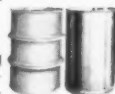
To provide extra protection for your product's quality, during processing or shipping, it will pay you to check the many advantages of Inland Process and Shipping drums. They are manufactured from several types of stainless steel, in many sizes. Process drums: 30 or 55 gallon capacity. Shipping drums: sizes from 15 to 60 gallons, with all modifications necessary to meet ICC specifications 5 and 5C. Whether you need 1 or a carload—Inland can supply the right stainless steel drum for your requirements. For a free booklet on "The Use and Care of Stainless Steel Drums," ask your Inland representative or write:

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Member of the **INLAND** Steel Family

6532 S. Menard Ave., Chicago 38, Ill.
Plants: Chicago • Jersey City
New Orleans • Cleveland and
Greenville, Ohio

Full line of steel and stainless steel shipping containers, including galvanized and heavy duty ICC drums.



Packaging NOTES

Canco Moves in Chicago

American Can Co., New York, has moved its Chicago headquarters to a new building at 200 South Michigan Ave., it was announced recently. The new quarters contain 55,300 square feet of floor space and include all of the 14th, 15th and 16th floors and half of the 13th floor. Canco's Chicago office formerly was located at 104 South Michigan Ave.

New O-I Plastic Container

Development of a new rigid polyethylene container for packaging detergents, waxes, polishes and related products was announced recently by Owens-Illinois Glass Co., Toledo. Commercial production will be started by O-I this spring at its Glassboro, N. J., plastics plant. The containers will be produced in capacities of from 12 to 32 ounces.

Carl R. Megowen, president of O-I, said that the new container will complement the company's line of glass containers, which furnish more than 60 per cent of O-I's annual sales volume. Made of high-density polyethylene, the new unit features a built-in pouring spout, is translucent and has wide design possibilities, almost as wide as glass, he added. Color of any kind may be produced by adding pigment to the natural polyethylene.

Mr. Megowen said, "Owens-Illinois had been working on development of a machine for making plastic containers for a number of years, but the introduction of high-density polyethylene in 1955 first made possible the successful production of the new container." He added, "the new package has important sales potentials and that it will take to market many new products that cannot be properly marketed now for lack of a satisfactory container. Cost will be comparable with other types of containers."

Later this year Owens-Illinois plans to install facilities for

producing the new unit at its St. Charles, Ill., plastics plant.

Heads Packaging School

Henry G. Walter, former president of Gerrard Steel Strapping Division of United States Steel Corp., Chicago, has been named executive director of Michigan State University's Packaging Foundation, Inc., a non-profit corporation to aid and promote all types of packaging education and research at the school. Mr. Walter's duties will include the establishment of a plant to house the School of Packaging, and supervise the support of research and graduate programs. The packaging curriculum, the only one of its kind in the nation, was started at Michigan State in 1952.

New Cellophane Package

A new cellophane package with a "Strip-Zit" tear tape designed for easy opening is being used by Clover Products Co., Rochester, N. Y., for packaging its recently-developed "Handi Wash" wash cloths. The flexographic reverse-printed bag is produced by the Shellmar-Betner Division of Con-

tinental Can Co., Mount Vernon, O., and is printed in green and white. The red "Strip-Zit" tape splits the package front in half, the top carrying a short sales message and the bottom some illustrated instructions for use. On the back of the package a number of additional uses are listed. Each bag contains 50 disposable soap-filled cloths impregnated with a mild facial soap.

Knox Moves in Cleveland

Knox Glass, Inc., Knox, Pa., last month moved its Cleveland sales office to new and larger quarters at 25000 Euclid Ave. In addition to increased office space, the new quarters will provide improved parking facilities. John F. Hahn will remain as branch manager. The office was located in the Forest Hill Building.

O-I Sales Increase

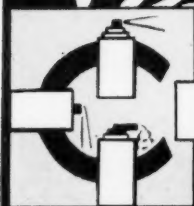
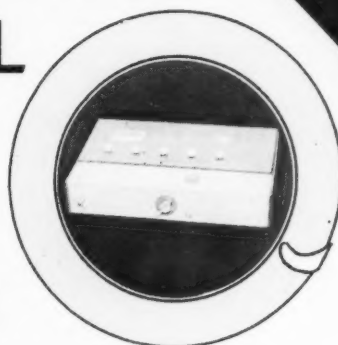
Sales of Owens-Illinois Glass Co., Toledo, increased during the first quarter of 1958, according to J. P. Levis, board chairman. Net sales in the quarter ended Mar. 31 totaled \$119,323,820, compared with \$115,111,505 in the similar 1957 quarter. Net income amounted to \$6,566,417, equal to share earnings of 80 cents. This compared with \$7,485,251 and 93 cents in the first three months of 1957.

New cellophane package with "Strip-Zit" tear tape, recently introduced by Continental Can Co., New York, has been adopted by Clover Products Co., Rochester, N. Y., for packaging its "Handi-Wash" wash cloths.



Continental Filling Corporation
... long a leader in quality aerosol filling, insures their customers of quality control by the use of this Gas Chromatography apparatus. The extremely sensitive instrument is used for research, particularly for the volatile constituents of materials received and formulas used. Your product is handled in this manner at Continental Filling to insure you of the finest in custom filling.

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Danville, Illinois

Three Soap Boxes Win Four Awards in 1958 Set-up Paper Box Competition

THREE soap boxes won awards in the eighth annual Set-up Paper Box Competition sponsored by the National Paper Box Manufacturers Association, Philadelphia. The awards were announced May 14 during the association's annual meeting and "Boxarama" exhibit, May 14-18, at the Sheraton-Cadillac Hotel, Detroit. Of the 79 awards selected from over 2,000 entries, all of which were on display at the exhibit, four were presented to soap boxes.

Winner of two awards was the "Pall Mall" soap chest of Hewitt Soap Co., Dayton, O., private brand soap firm. Hewitt's soap chest won first award among all soap boxes in Class A, for "general superiority according to end use." In addition the "Pall Mall" soap chest received an honorable mention in Class C, for "superiority of construction." The award winning Hewitt chest was produced by Piqua Paper Box Co., Piqua, O. It is a three drawer chest containing nine cakes of soap. The box was designed both to appeal to gift shoppers and have re-use value to the ultimate consumer. It is covered with ivory paper, "tastefully decorated" with an embossed gold design. Ribbon drawer pulls simplify opening and closing.

Second award winner in soap boxes was "Yardley Red Roses" soap box of Yardley of London, Inc., New York, Newark (N. J.)

Award winners of the 1958 Set-up Paper Box Competition sponsored by the National Paper Box Manufacturers Association, Philadelphia. Top to bottom: Second award in soap boxes, "Yardley Red Roses" by Yardley of London, Inc., New York, Newark (N.J.) Paper Box Co. supplied the box.

Winner of two awards, first award in soap boxes and honorable mention in construction, "Pall Mall" soap chest of Hewitt Soap Co., Dayton. Box by Piqua Box Co., Piqua, O.

"Neutrogena" soap of Martha Lorraine Import, Los Angeles, won honorable mention in soap boxes. Pacific Paper Box Co., Los Angeles, supplied the winning box.

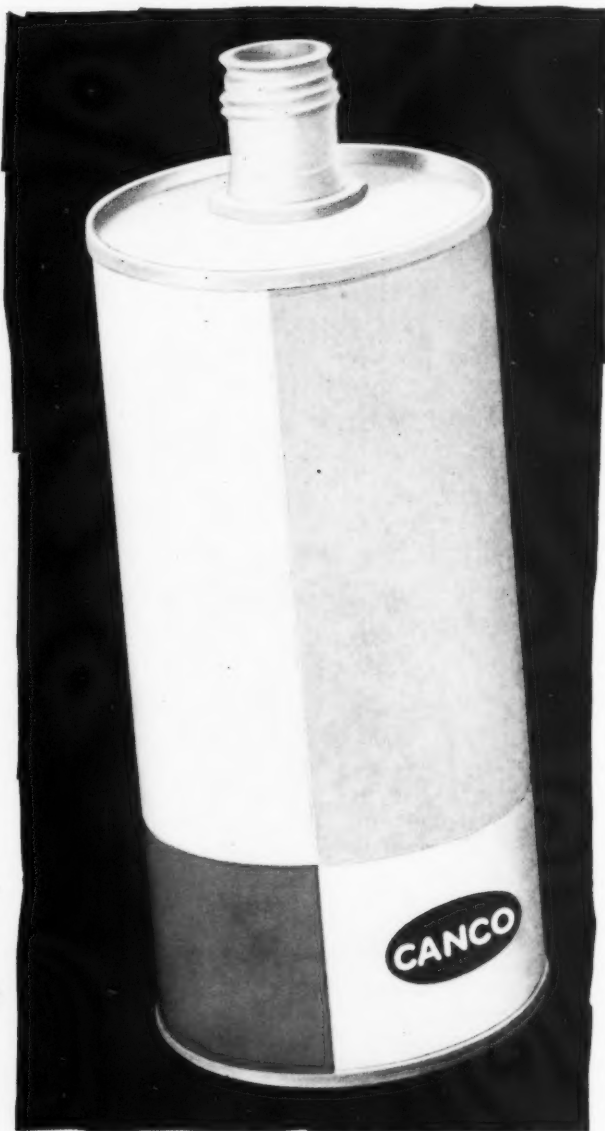
Paper Box Co. supplied the box, which featured, in the opinion of

the judges, a "distinguished and artistically styled covering" that "combines color with a vinyl finish." "The interior of the box," according to the judges, "is harmoniously lined to further the im-



CANCO'S NON-DRIP CAN

HERE'S THE
PACKAGE
WITH PROVEN
APPEAL TO
CONSUMERS . . .



A variety of plastic caps manufactured to your specifications

The sensational can for almost any liquid product . . . *perfect* for the new heavy-duty detergents! • In food stores, paint stores, filling stations, everywhere—you'll see Canco's Non-Drip Can. It's boosting sales for dozens of products and it can do the same for *your* liquid specialty! • Consider the features of this outstanding package: A clinched nozzle that pours freely, yet won't drip a drop when righted. Full decoration on top, on sides. Easy to fill, compact, lightweight, handy, unbreakable. In short, everything you, your dealers and your customers want in a modern container! • Ask your Canco representative today for details about this sales-making can and how it can serve your product!

AMERICAN

SOAP and CHEMICAL SPECIALTIES

CAN COMPANY

pression of a dignified and quality product. The box is automatically produced for minimum cost."

"Neutrogena" soap of Martha Lorraine Import, Los Angeles, received honorable mention in the soap boxes category. Pacific Paper Box Co., Los Angeles, supplied the box, which the judges commented "accomplishes multiple sale of the product through visual attraction." The soap was formerly sold as individual bars. The box, according to the judges, "further enhances sales by appealing to the gift or impulse buyer. Transparent lid permits full identification of the product, eliminating need for printing on the box itself."

Other award winners included "Tweedie" bath powder box by F. N. Burt Co., Buffalo, for Lenthier, Inc., New York, which received a second award in Class A for "general superiority of construction." Similarly, an honorable mention award went to "Tinkerbelle 'Princess'" box made by Niagara Box Co., Fair Lawn, N. J., for Tom Fields, Ltd., Fair Lawn.

Of the 79 awards presented during the meeting of the National Paper Box Manufacturers Association, 25 first award certificates, 26 second awards and 28 honorable mentions were given out to winning box manufacturers. Duplicate certificates for their customers were presented. For the first time this year award certificates were presented to designers of the winning boxes in recognition of their contribution to the success of the package.

Selections were made by a panel of eight judges experienced in the fields of packaging, merchandising and design. The criteria applied in selecting the award winning boxes in 24 separate product categories were merchandising appeal, complement of product and box, brand identification, and convenience of use by the consumer. Awards for excellence of design, construction, and display, were respectively, made on the basis of art design, ingenuity of construction,

and merchandising display value.

Better made, low cost, mass produced boxes were noted by the judges, who also observed that an increasingly large part of the total package cost is being spent on appearance. The requirements of self-service merchandising, as well as impulse and gift buying, were also apparent in the myriad of products packaged in the competing functional and artistic set-up boxes. Growth of packaging "related items" was noted for a growing number of items.

Judges included:

Henry J. Aemisegger, retired, G. A. Bisler, Inc., Philadelphia; John J. Dillon, director of publicity, Grover Cronin, Inc., Waltham, Mass.; Charles A. Feld, executive director, Packaging Institute, New York; Pearl Hagens, senior editor, Modern Packaging, New York; Frank X. Kieler, editor, Department Store Economist, Philadelphia; Luke H. Lipka, industrial designer, Wm. H. Simkins Studio, Philadelphia; Maxwell B. Rogers, director of design, Avon Products, Inc., New York, and John A. Warren, technical advisor, packaging division, American Management Association, New York.

New C-P Corrugated Shipper

A new 50-pound corrugated shipper for packaging four of its industrial soap products was announced recently by Colgate-Palmolive Co., New York. Products to

be packaged in the new unit include "Colgate Formula 40," "Colgate" low foam condensed detergent, and the company's "Arctic" crystal flakes and "Arctic" crystal granulated soap. These products previously were packaged in 140-pound cloth bags. The new shipper features a tear-tape which facilitates either partial or complete removal of the package top. It is said to be easy to handle and easy to stack both in the warehouse and on pallets.

—★—

Continental Names Towne

G. A. Towne has been appointed district sales manager in Buffalo, N. Y., for the fibre drum and corrugated box division of Continental Can Co., New York, it was announced recently by Peter Wojtul, division vice-president. He succeeds A. J. Brewster who has been transferred to the firm's New York office.

In his new capacity, Mr. Towne will be in charge of all fibre drum and corrugated box sales in the Buffalo district. He previously served in a executive sales capacity with Continental's Tonawanda, N. Y., plant. Before that, he was a salesman in the St. Louis district. He joined the firm in 1948.

New 50-pound corrugated shipper, just announced by Colgate-Palmolive Co., New York, for packaging four of its industrial soap products. It features a tear-tape which facilitates either partial or complete removal of the package top. Products to be packed in the new unit include "Colgate Formula 40," "Colgate" low foam condensed detergent, and the company's "Arctic Crystal" flakes and "Arctic Crystal" granulated soap. These products formerly were packed in 140-pound cloth bags.



VULCAN PAILS and DRUMS

Yours for

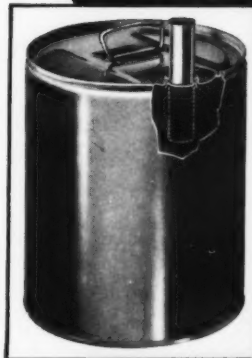
QUALITY CONTROL — plus

Hi-Bake Linings
Expert Lithography
Prompt Delivery

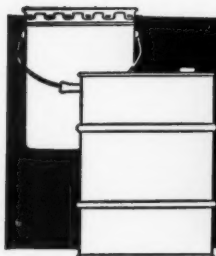
- Vulcan Steel Pails and Drums are *Sized and Styled for Your Product* — they're the answer to your toughest packaging problem.
- Vulcan Hi-Bake Linings spell scientific packaging for your *Hard-to-Hold* products.
- Vulcan Steel Pails and Drums are control-engineered for shipping, storing — with No-Spill, No-Leak, Tamper-Proof fittings and closures.

Every Vulcan Steel Pail and Drum is individually inspected and tested. Wide variety of styles—Plain Cover, Open Head Lug Cover, Closed Head Drum type.

SIZES 1-30 gallons



OVERNIGHT SERVICE — Vulcan Steel Container Co., Sales Offices in principal cities. Completely Stocked, Full-Line Warehouses Strategically Located Insure Immediate Delivery — **AT ALL TIMES**. For detailed information, samples, prices, write or wire Vulcan Steel Container Co., Birmingham, Alabama.



VULCAN STEEL CONTAINER CO.

Main Office and Factory

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New Plastic-Steel Container

A new returnable steel drum with a polyethylene inner container for shipping corrosive chemicals



was developed recently by Plax Corp., Hartford, Conn., and Jones and Laughlin Steel Corp., Pittsburgh. Tradenamed "JALboy," the new unit weighs about 23 pounds, approximately one-third the weight of a glass carboy. The exterior of the drum is coated with a phenolic-based material to resist corrosive atmospheres and spillage. The cover also comes coated with eight to 12 mils of polyvinyl chloride to protect against corrosion.

The neck and cap of the polyethylene container, by Plax, protrude through a 4½-inch diameter curled and gasketed opening in the cover of the drum. "JALboy" is available in two sizes: a standard weight 14-gallon unit with a 5¾-pound inner container, and a heavy-duty 13-gallon unit with 8¾-pound inner container. It also may be obtained with trademark or label copy lithographed in up to four colors. Side handle grips are also available. The unit is assembled at J&L's Cleveland container division plant. It will be marketed through J&L's sales force and by distributors of Plax.



New Vulcan Pamphlets

Two new pamphlets describing specifications of new drums recently added to its product line were issued last month by Vulcan Containers, Inc., Bellwood, Ill. One

of the pamphlets reviews the firm's new 55-gallon "Uni-Drums," which feature slightly offset rolling hoops to provide an interlocking action designed to save shipping space and reduce handling costs.

The second pamphlet describes the applications and accessories for open and tight head 55-gallon drums, the single and double blade 55-gallon drums and closed head 15-gallon drums, and 100 and 120-pound capacity open head grease drums.

Copies are available.



New O-I Safety Cap

A new rigid polyethylene safety closure for bottles, designed to make it difficult for small children to remove, without posing any removal problem for adults, has been developed by Owens-Illinois Glass Co., Toledo. The cap, which was announced last month, is expected by the maker to be widely used for household chemical specialties and allied products. The cap is removed from the package by pushing up one edge with the thumb at bead openings in the front and back of the bottle.

Other organizations which participated in the development of the cap include Plough, Inc., Memphis, and The Home Makers Guild of America. Plough is now using both O-I bottles and safety caps for packaging its pharmaceuticals.

New Continental Bottle

Development of a new unbreakable one-gallon plastic "Boston Round" bottle was announced



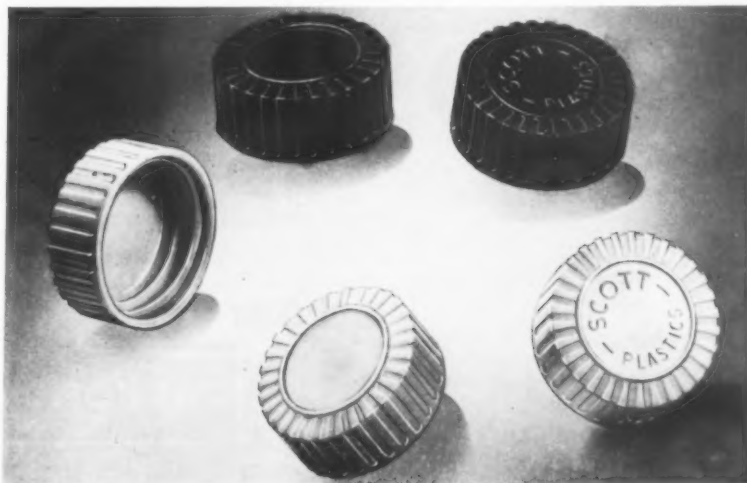
recently by the plastic container division of Continental Can Co., Chicago. Light in weight, the containers are designed to facilitate handling and storage. They are available in 38/400 and 38/430 finishes in natural polyethylene and can be made in a wide range of colors as well as linear polyethylene. According to the manufacturer, the new bottles are suited for packaging a variety of chemical products and specialty items.



New Scott Closure

Development of a new standard size plastic closure with a price-marking spot on the top was announced recently by Scott Plastics, 404 Windsor St., Hartford, Conn. Caps are available in all colors.

New standard size closure developed recently by Scott Plastics, 404 Windsor St., Hartford, Conn., features a price-marking spot on top. Cap is available in all colors.



**THE ROAD TO
INCREASED SALES LEADS
TO STALFORT FOR.....**

AEROSOL FILLING CUSTOM PACKAGING



Stalfort can manufacture your formula, liquid or powder aerosol concentrate and fill with an inert compressed gas or conventional propellant.

Pastes, liquids, or powder manufactured and packed in conventional containers.

JOHN C.



TALFORT & SONS, INC.

PLANTS—
Arbutus, Baltimore, Md.

OFFICE—
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Manufacturing Chemists since 1868

AMA Packaging Show in N. Y. May 26-30

"**C**OST Reduction in Packaging" will be the theme of the 27th annual National Packaging Exposition to be held at the New York Coliseum, May 26-30. The show will be held in conjunction with the National Packaging Conference, which is scheduled for the Hotel Statler, May 26-28. Both events are sponsored by the American Management Association, New York.

Occupying all four floors of the Coliseum, the exposition will provide a comprehensive view of everything vital in the packaging industry today. Included among the almost 400 exhibitors are 128 manufacturers of materials and supplies, 73 exhibitors of containers, 160 manufacturers of machinery and equipment and 39 exhibitors of services and publications. The exhibit booths will cover more than 130,000 square feet of floor space. An attendance of more than 40,000 is anticipated.

Among the items to be shown by materials manufacturers are the latest developments in films, papers and boards designed for specific end uses, new laminates, formed plastic sheets, stretchable polyethylene films and stretch paper for multi-wall bags.

Container exhibits will include new liners, recently-developed plastic bottles, new aluminum cans, plastic-coated bottles for aerosol packaging and plastic-coated bottles for packaging special formulations.

Machines to be displayed include the latest in aerosol processing and packaging equipment, automatic high-speed packaging machines for plastic forming; automatic quality control equipment; equipment for flexible packaging and marking equipment.

The exposition will be open on Monday, May 26 from 10:00 a.m. to 6:00 p.m.; Tuesday, May 27, 10:00 a.m. to 9:00 p.m.; Wednesday, May 28, 10:00 a.m. to 6:00 p.m.; Thursday, May 29, 10:00 a.m.

to 6:00 p.m.; and Friday, May 30, 10:00 a.m. to 4:00 p.m.

At the opening session of the National Packaging Conference on Monday, May 26 representatives of Gerber Products Co., Fremont, Mich., will show how that concern has reduced overhead cost and breakage and maintained a minimum inventory by using rigid specifications and quality control standards. They will also illustrate how Gerber's packaging line has been speeded up through engineering concepts initiated within the organization. Speakers will include John C. Suerth, general manager of manufacturing, and N. E. Burnett, chief engineer.

"Systemated" packaging at Lewis-Howe Co., St. Louis, will be the topic of the conference on Tuesday, May 27. W. T. Dooley, Jr., vice-president; Robert B. Etter, Jr., plant superintendent; and Philip H. Lanhan, engineer, will review manufacturing and packaging techniques of the firm. They will describe how Lewis-Howe arrived at the concept of integrating its machines into a self regulating system by designing electrical and mechanical equipment to permit the product itself to perform the duties of control.

On the final day of the conference, Wednesday, May 28, representatives of the Ford Motor Co., Dearborn, Mich., will show how management, materials handling and packaging are related. C. L. Hanchett, supervisor of material handling engineering and inventory planning and handling, and W. A. Albrecht, superintendent of handling will discuss how individual requirements and interdependent relationships of product design, packaging, shipping, and intra-plant handling are analyzed to develop methods that will effect the most economical movement and storage of materials. Subjects to be discussed include intra-plant and in-plant material handling; packaging and shipping materials; containers

and methods; and aids to vendors in their packaging and shipping. The speakers will also review the results achieved in utilization of plant, equipment, and personnel; freight, receiving, and handling expenses; and product quality.

The conference will be held on May 26 from 9:30 a.m. to 12:00 noon, and on May 27 and 28 from 9:00 a.m. to 12:00 noon. Information on registration for both the show and conference may be obtained from the Packaging Division of the American Management Association, 1515 Broadway, New York 36.

—★— GCMI to Meet May 20-23

The annual membership meeting of the Glass Container Manufacturers Institute, Inc., will be held at Greenbrier, White Sulphur Springs, W. Va., May 20-23, according to Victor L. Hall, GCMI general manager. General sessions will be held on the mornings of May 21, 22 and 23. Speakers include Jacob Baker, Econometric Institute, Inc.; W. E. Hoadley, Jr., of Armstrong Cork Co., Lancaster, Pa.; and Edmund F. Ball, president and board chairman of Ball Brothers, Inc., Muncie, Ind., and GCMI president.

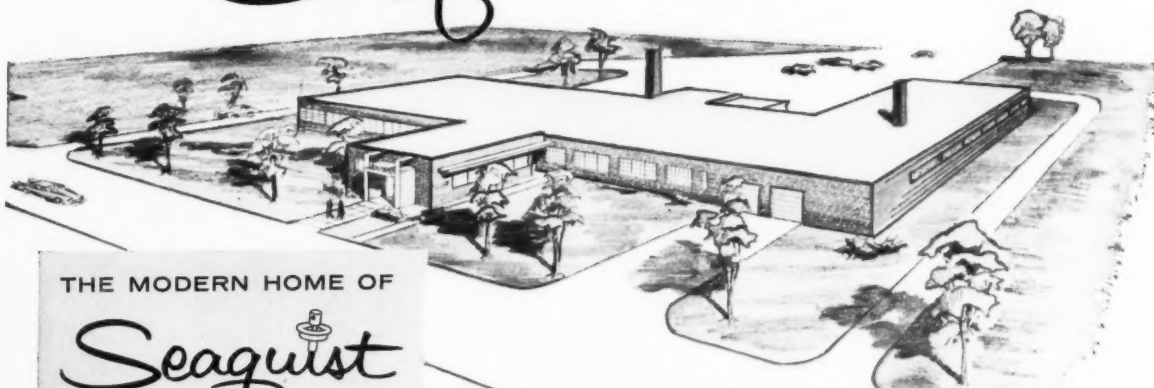
J. C. Feagley of Armstrong Cork is chairman of the program committee which includes C. G. Bensinger of Owens-Illinois Glass Co., Toledo and J. S. Heuveler of Maryland Glass Co., Baltimore.

—★— Federal Glass Plans Merger


The boards of directors of Federal Glass Co., Columbus, O., and Federal Paper Board Co., Bogota, N. J., recently approved an agreement for merger of the two concerns. Federal Glass makes glass and corrugated containers, while Federal Paper Board produces folding boxboard and cartons.

The merger agreement provides for the exchange of one share of Federal Glass common stock for 1.155 common shares of Federal Paper Board and one-half of the latter's 4.6 per cent cumulative preferred stock.

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★ Also a sealing and retaining ring eliminating loose buttons and seepage common with high oil formulation products.

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National Spray Can Filling Corp.
Brooklyn, N. Y.
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Sun-Lac Inc.
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SOAP and CHEMICAL SPECIALTIES

At the Packaging Show, Booth # 1511

What's New?

Purex Corp., Ltd., South Gate, Calif., has adopted a newly-designed glass bottle by Litchford-Marble Glass Co., Los Angeles, for packaging its "Purex" heavy-duty liquid chlorine bleach. New container features a new finger-grooved handle for a firmer grip and a cutaway design under the handle to provide more room for the hand. The new label displays the familiar octagon trademark in light blue with "Purex" in red against a white background. The full-color picture of the young homemaker is set against a background of bright yellow. The back of label carries, in panel style, full instructions for use, employing clear dark blue printing on a white background. Bottle is of brown glass with a circular grooved design both above and below label. Both bottle and label designs by Alfred Sterges Associates, Los Angeles.



New concept in soap package design utilizing black and white halftones on both sides of the box to illustrate the different applications of its "Maple Leaf" soap flakes, was announced recently by C-P Co., a division of Canadian Packets Co., Toronto. Photos show a girl washing lingerie, another the care of baby clothes, etc. Package identification with product has been retained through use of blue color bar above photo and red below. Package bottom features product's new advertising theme, "Honestly... pure soap flakes are equal!" Package design is by John Belknap, Ltd., Toronto.

New "Hot Shot" insect killer, now being distributed in the southwest, southeast and selected northern markets by Amco Chemical Co., Memphis, Tenn., is packaged in pint and quart glass bottles by Owens-Illinois Glass Co., Toledo, O. Bottle comes with spray fitment which is attached to it by a cardboard collar. Package, which is distributed through wholesale grocers, drug, tobacco and hardware jobbers, features red and white label. Metal closure is also by Owens-Illinois. Product also comes in 14-ounce aerosol container.





Hazel Bishop, Inc., New York, is now marketing its new aerosol hair spray in a new eight-ounce container by Continental Can Co., New York. Wrapper, designed by Raymond Spector Co., New York, blends a turquoise-colored design with gold bronzing, on a diamond-embossed finish. Available in both regular and super-soft strength styles, the product is filled by G. Barr and Co., Chicago. Valve is by Precision Valve Corp., Yonkers, N. Y., and cap is by Sterling Seal Co., Erie, Pa.

A new, three color, five-ounce plastic tube, recently was adopted by Viking Manufacturing Co., Natick, Mass., for packaging its "Viking" waterless hand cleaner. Product contains hexachlorophene and lanolin. It also is available in pint plastic and glass jars and in gallon cans.



O-Cedar Division of American Marietta Corp., Chicago, recently adopted a new-type bottle for packaging its full line of polishes. The new package has a tall, slim design and is tapered near the top to provide a secure grip. Compared with the former bottle, it doubles storage capacity of retailer shelves, according to the manufacturer. Products to be featured in the new package are "O-Cedar" scratch touch-up polish, glass polish, cream polish, furniture polish and "Dri-Glo" furniture wax.

Lawrence Laboratories, Inc., New York, is now distributing its new "Sulfoam" aerosol shampoo, with lanolin, in a colorful counter display unit. Manufacturer recently began test-marketing the product in New York and nearby areas. It presently has spot distribution east of Chicago. Introduction of "Sulfoam" in New York is being supported by television advertising. Eight-ounce aerosol can of product retails for \$1.23. Trial size sells for 73 cents while large size retails at \$1.98.



Lever Brothers Co., New York, is now offering its "Pepsodent" toothpaste in seven-ounce aerosol container by Crown Cork & Seal Co., Philadelphia. Package colors are red and white, similar to the tube dentifrice. Container features a special cap which is designed to permit dispensing of product with lighter finger pressure. Retail price is 98 cents. Valve is by Precision Valve Corp., Yonkers, N. Y. Product is filled at Lever's Hammond, Ind., plant.





"Floor Mate," a new sanitizing dust control floor treatment, recently introduced by R. M. Hollingshead Corp., Camden, N. J., is designed for use on mops and cloths. One square yard of treated cloth will dust approximately 6,500 square feet of floor space, according to the maker. Cloths and mops may be treated either by immersion or by spraying. Claimed to be non-toxic and nonflammable "Floor

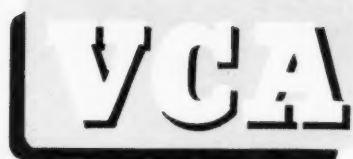


Mate" is available in five-gallon openhead drums. Hollingshead also disclosed that polyvinyl has been added to the formula of its heavy duty floor wax. The material is designed to improve the gloss and durability of the wax. The product, which contains 14 per cent solids, is anti-slip and may be used on all types of flooring, according to the manufacturer. It comes in a variety of sizes.

New "Woodbury" shampoo of Andrew Jergens Co., Cincinnati, is now available in a new 7½-ounce large-size bottle. Product retails for 59 cents and is packed one dozen to a carton. Point-of-sales display units are available.

New cleaner and polish designed for use on floors of asphalt, rubber tile, vinyl, wood, marble and terrazzo, was introduced recently by the industrial products division of Cellowax Co., Baltimore. Tradenamed "Pantaloen," the product is anti-slip and cleans and polishes in one application, according to the manufacturer.





GOES VERTICAL



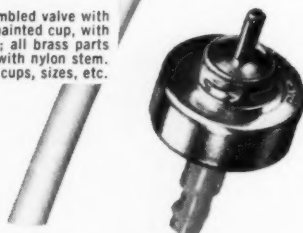
B8—VCA GLASS BOTTLE VALVE.
For Perfumes, Hair Lacquers,
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A completely assembled valve with
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For Hair Lacquer, Shave Creams,
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A completely assembled valve with
a 1" tinplated, unpainted cup, with
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A completely assembled valve with
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From VCA's new unparalleled facilities,
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SOAP and CHEMICAL SPECIALTIES

NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12 (a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the *Gazette*. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany each notice of opposition.

Plasti Shine—This for liquid polish. Filed May 8, 1957 by Agricultural Laboratories, Inc., Columbus, O. Claims use since Jan. 16, 1957.

Gersonite—This for floor wax. Filed June 20, 1957 by Gerson-Stewart Corp., Cleveland. Claims use since May 21, 1957.

Dura Glaze—This for automobile polish and cleaner. Filed June 25, 1957 by Dura-Glaze, Inc., Long Beach, Calif. Claims use since Mar. 15, 1956.

Baby Bouquet—This for room deodorant. Filed Jan. 25, 1957 by Aerosol Pak Corp., Toledo, now operating as Spray Dispensers, Inc. Claims use since Dec. 20, 1956.

Dav Ad—This for antioxidants. Filed Apr. 22, 1957 by W. R. Grace & Co., New York. Claims use since Apr. 17, 1957.

Formula 900—This for cleaning preparation for removing soap film. Filed Apr. 19, 1957 by Franklin Research Co., Philadelphia. Claims use since Mar. 25, 1957.

Repellent Tissue—This for insect repellent. Filed Dec. 31, 1956 by Whitmire Research Laboratories, Inc., St. Louis. Claims use since May 20, 1956.

King—This for institutional deodorant. Filed June 17, 1957 by Edward Don & Co., Chicago, Ill. Claims use since February, 1956.

Multi-Spray—This for insecticides. Filed June 27, 1957 by MFA Oil Co., Columbia, Mo. Claims use since May 3, 1956.

Iris—This for bleach. Filed Aug. 19, 1957 by Fitzsimmons Stores, Ltd., doing business as Smart & Final Iris Co., Vernon, Calif. Claims use since June 1, 1953.

Citromuls—This for sequestering and surface active agents. Filed Aug. 27, 1957 by Chas. Pfizer & Co., Brooklyn, N. Y. Claims use since Jan. 30, 1957.

Sequel—This for sequestering and surface active agents. Filed Aug. 27, 1957 by Chas. Pfizer & Co., Brooklyn, N. Y. Claims use since Mar. 12, 1957.

Lens Gleem—This for spectacle lens cleaner. Filed Apr. 29, 1957 by Leonard Friedberg, New York. Claims use since Jan. 22, 1957.

Coloronite—This for detergent. Filed Apr. 8, 1957 by Hagan Chemicals & Controls, Inc., Pittsburgh.

Claims use since Jan. 10, 1957.

Free 'N Easy—This for shampoo. Filed Aug. 2, 1957 by the Toni Division of Gillette Co., Boston. Claims use since July 1, 1955.

Black Magic—This for professional dry cleaning solvent. Filed Sept. 9, 1957 by Adco, Inc., Sedalia, Mo. Claims use since Aug. 8, 1957.

Presto-Brite—This for floor and wall cleaner. Filed by Hubbs and Howe Co., Buffalo, N. Y. Claims use since November, 1951.

Avon—This for shampoo and toilet soap. Filed Sept. 10, 1957 by Avon Products, Inc., New York. Claims use since September, 1929.

Filter Queen—This for concentrated carpet cleaner. Filed Sept. 11, 1957 by Health-Mor, Inc., Chicago. Claims use since March, 1954.

Precision Mechanical—This for petroleum base cleaner. Filed Sept. 12, 1957 by Fries & Fries, Inc., Cincinnati. Claims use since May 2, 1956.

FS—This for insecticide. Filed Sept. 4, 1956 by Illinois Farm Supply Co., Chicago. Claims use since Aug. 19, 1955.

Spring Breeze—This for household deodorant. Filed June 20, 1957 by Pennsalt Chemicals Corp., Philadelphia. Claims use since Nov. 21, 1956.

Bits O' Sunshine—This for disinfectant and household deodorant. Filed Aug. 1, 1957 by Frank J. Curran, Downers Grove, Ill. Claims use since July 11, 1957.

Old Empire—This for shaving cream. Filed Mar. 30, 1956 by Old Empire, Inc., Newark, N. J. Claims use since Sept. 9, 1939.

Shave Whip—This for shaving cream. Filed Apr. 1, 1957 by Campbell Products Co., Bensenville, Ill. Claims use since July 19, 1950.

Tops—This for whitewall tire cleaner and car wash. Filed July 17, 1956 by Carl E. Sykes, Sr., doing business as The Tops Chemical Mfg. Co., Norfolk, Va. Claims use since Oct. 21, 1953.

Lazy Boy—This for liquid detergents. Filed Oct. 15, 1956 by Fine Laboratories, Inc., Freeport, Ill. Claims use since Feb. 7, 1956.

Guardman—This for rug and upholstery cleaner. Filed Mar. 18, 1957 by Grand Rapids Varnish Corp., Grand Rapids, Mich. Claims use since June, 1956.

Maxade—This for detergent for cleaning floors, walls and dishes. Filed Apr. 8, 1957 by Hagan Chemicals & Controls, Inc., Pittsburgh. Claims use since Jan. 10, 1957.

E-Z Strip—This for industrial cleaner and detergent. Filed July 30, 1957 by Pennsalt Chemicals Corp., Philadelphia. Claims use since Jan. 26, 1951.

Ke-Sonic—This for emulsion cleaners. Filed Aug. 15, 1957 by Kelite Corp., Los Angeles. Claims use since May 1, 1955.

Golden Rey—This for dishwashing compound. Filed Aug. 26, 1957 by S. E. Rykoff & Co., Los Angeles. Claims use since April, 1947.

Glowing Star—This for soap

powder. Filed Aug. 26, 1957 by S. E. Rykoff & Co., Los Angeles. Claims use since 1933.

Griffin's—This for detergents and soaps. Filed Sept. 3, 1957 by Griffin Bros., Inc., Portland, Ore. Claims use since July 1, 1932.

Packer's Charm—This for shampoo. Filed Sept. 6, 1957 by Packers Tar Soap, Inc., Mystic, Conn. Claims use since June, 1956.

★

Record Continental Sales

Sales of Continental Can Co., New York, reached an all-time high of \$1,046,267,000 in 1957, compared with \$1,010,268,000 in 1956, according to its annual financial report issued last month. Net income, however, fell slightly to \$11,040,000, equal to share earnings of \$3.52, from \$13,143,000 and \$3.71 in 1956.

According to Lucius D. Clay, chairman, and Thomas C. Fogarty, president, earnings were lower because of increased wages and "rising costs of materials, freight, etc., without compensating price increases. At the same time, most divisions suffered from the slowdown in business activity in the last quarter.

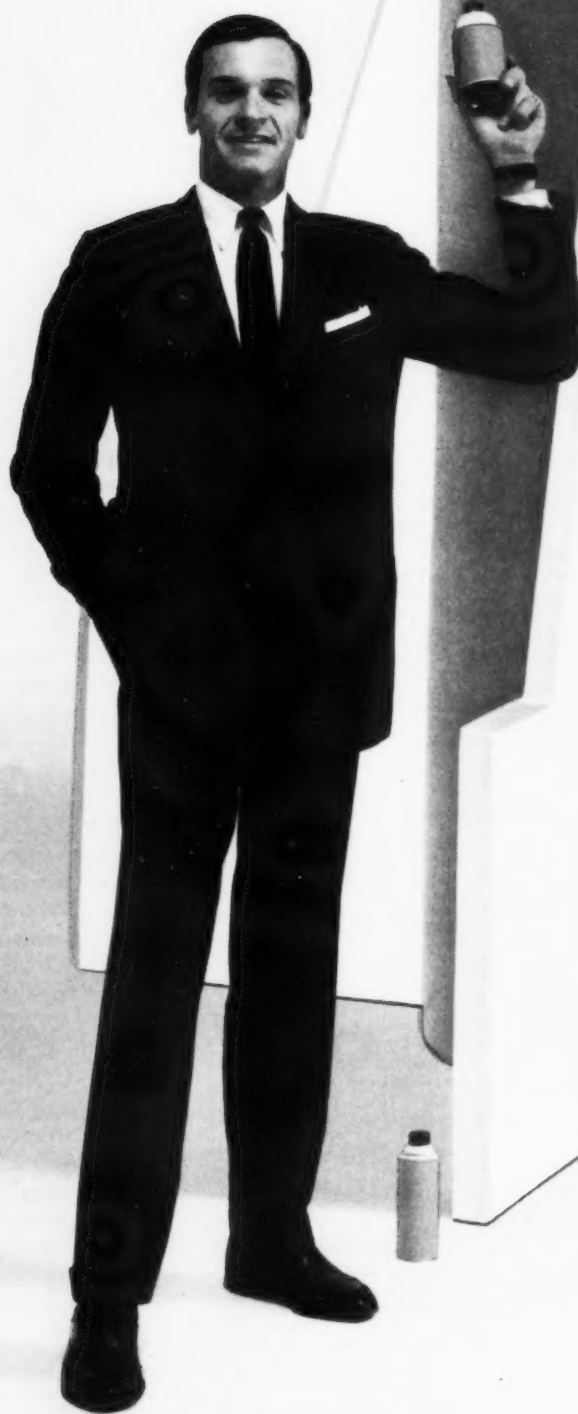
"In the case of metal cans, which represent about half our sales volume, this decrease was accentuated by the advance buying in 1956 to beat a price increase of Nov. 1, 1956. A portion of this 1956 sales bulge was borrowed from 1957 sales. An increase in metal can prices, which became effective on Mar. 10, is expected to offset some of the increased costs that we have been absorbing since the last increase May 1, 1957."

★

Diamond Names King

Appointment of James O. King as manager of agricultural chemical sales for Diamond Black Leaf Co., Cleveland, was announced recently by L. J. Polite, sales manager of the chlorinated products division. Mr. King formerly was special staff assistant at the Cleveland office where he handled various assignments, including the coordination of the firm's package modernization program. Prior to that, he served as a sales representative in Oklahoma, Kansas and Colorado.

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PACKAGING

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For example—if you are interested in marketing a new aerosol, General Chemical can tell you about promising new aerosol formulations developed in our laboratories . . . and can assist in the development of *your own* new aerosol formulation.

You may want to know about contract fillers and how they work. General Chemical can tell you about reliable contract fillers in all parts of the country who are equipped to handle production of test market *and* commercial quantities—relieving you of any need to invest in special equipment or personnel.

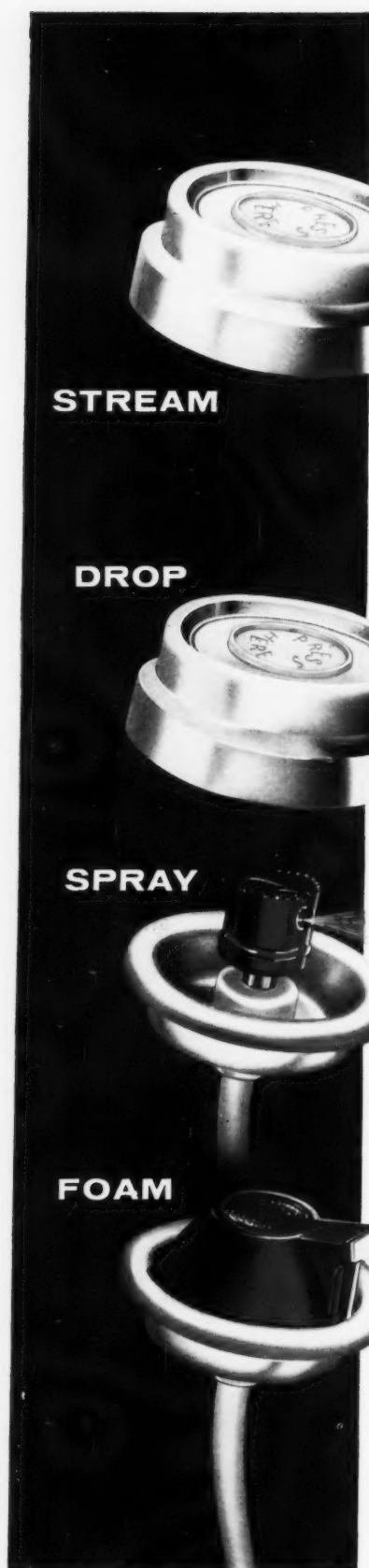
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SOAP and CHEMICAL SPECIALTIES

PRESSURE PACKAGING

Reply on Aerosol Hair Sprays

A REPLY to the article, "Doctors Warn on Aerosol Hair Sprays," which appeared in last month's issue, has been made in the form of a statement by W. Earl Graham, chairman of the Aerosol Division, Chemical Specialties Manufacturers Association. This statement is not held to be an analysis of the article entitled "Thesauritis Following Inhalation of Hair Sprays" which appeared originally in *The New England Journal of Medicine*, March 6, 1958, pp. 471-6. The Aerosol Division is investigating the entire matter through its scientific committees. Mr. Graham's statement follows:

"It is difficult to understand why *Soap & Chemical Specialties* used poor judgment in publicizing the New England Journal of Medicine article on "Thesauritis Following Inhalation of Hair Sprays." The preliminary nature of the report surely must have indicated that accurate editorial comment was extremely necessary. A comparison of your article, "Doctors Warn on Aerosol Hair Sprays," with the actual findings and conclusions of the doctors who wrote the *Journal of Medicine* article indicates that it contains many misleading quotations and misinterpretations of the findings.

For example, your reporter indicates in the second paragraph of the article that the two young women used hair spray "several times a day." He further indicates in the same paragraph that the doctors "support their thesis by citing previous work reporting the hazards of parenteral administration of PVP, dextran, CMC and other polymeric substances and results of extensive animal experiments." You might ask your reporter to indicate where in the *Journal of Medicine*

article "several times a day" is mentioned and where any references are cited by the doctors in support of their thesis. Not only did the reporter fail to point out the serious limitations on the work, he also appears to have added some unsupported statements of his own.

In the third paragraph, your reporter fails to point out that several years elapsed between the negative X-rays and the X-rays showing lesions. This certainly has a bearing on the problem. Without such knowledge, a reader would presume that X-rays had been taken immediately before and immediately after use of hair sprays. Furthermore, how can the conclusion be reached that "the only inhalant to which the patients had been exposed was hair spray" when it must be realized that several years elapsed and that many other substances undoubtedly had been inhaled.

The fourth paragraph is absolutely correct in so far as correct news reporting is concerned. The last sentence should be particularly noted—"However, the exact nature of the particulate matter present in the lesion *could not be determined*." One should also take into consideration that hair sprays differ in composition. Many of the present sprays do not contain the materials referred to in the article. As a representative of the industry, should not this have been the theme of the article with the indication that further studies are being carried out by the industry to evaluate the doctor's findings?

In the fifth paragraph, the penultimate sentence concludes that damage of Kupffer type cells weakens the body's defense against cancer and possibly arterio sclerosis. The latter point appears to be the

reporter's conclusion. Nowhere does the *Journal of Medicine* article indicate such a conclusion on the doctor's part.

In the next paragraph, the reporter suggests an onerous conclusion; namely, that a latent period of 15 to 30 years may have to elapse before tumors may develop in humans—and implies that hair spray users are taking a long term risk. The reporter certainly attempts to create an authoritative impression upon the lay reader with almost no authority to support such a position.

In the eighth paragraph, the writer again assumes that cloak of authority on the subject. The doctors did not state that "... it appears that PVP inhaled from hair sprays can cause granuloma and inflammatory reactions." Another error occurs in the statement that "PVP inhaled through ingestion is stored in the cells of the lungs." It should be remembered that the substance in the lymph nodes and lungs has yet to be identified. The circumstantial evidence now available is far from conclusive as to the material in the nodes.

Basically, had you elected merely to reprint this article, it would not have elicited any criticism. Anyone reading the article is immediately aware of its shortcomings. Only two cases were reported. With 300 million cans of hair spray having been sold and used in the last six years, the evidence presented certainly is inconclusive at this stage.

In view of the many millions of dollars now being spent on research by the cosmetic companies to insure the safety of their products, including hair spray, it is only fair to ask that *Soap and Chemical Specialties* present this statement as a fair evaluation to its readers.

Editor's comment: The nature of the original report in the New England Journal of Medicine appeared to us to be of vital importance to every manufacturer and marketer of aerosol hair sprays and as such could not be ignored by us. We felt that it was our job to in-

form aerosol producers everywhere of these new reported findings whether true or false. Our attempts

to explain certain technical medical terms in lay language may have been misunderstood.

* * * * *

Comments on Pressure Packed Toothpaste

AN experienced observer of aerosol products recently made some interesting comments on pressure packaged dentifrices. Admitting he was skeptical about the practical value of dispensing toothpaste from a pressure package when the idea was first brought to his attention, he now feels that aerosol dentifrices do have definite advantages. This transition from skepticism to support of the idea came about as a result of using an aerosol toothpaste daily for over a month.

Although some of the can's advantages over the tube are intangible, he said, they are real, nonetheless, and will quickly make themselves apparent to the consumer. In the opinion of "experienced aerosol observer," the six-ounce pressure packaged dentifrice is easier to handle than the largest size tube of toothpaste. The amount of dentifrice dispensed from the aerosol container is easier to control than that squeezed out of the tube. As a result there was no waste in the five-week period using the aerosol dentifrice. What remains in the pressurized package when use is completed, is still an unknown quantity. However, tubes can be emptied completely. The can, esthetically, is less objectionable on the wash basin of today's fancy bathroom than a half empty rolled or unrolled tube, says our observer.

What about cost comparisons? "Experienced aerosol observer" had not gone into this too carefully, he said. It was his impression that the six ounce can at 98 cents retail, was not too far off the cost of a giant economy size tube of toothpaste at 79 cents. The aerosol dispensed product seemed to last longer than that in the tube, he said.

On the subject of waste, our observer wished to make one dis-

tinction. It has been mentioned that there was no waste using the aerosol dentifrice. There was some slight dripping or residue on the can. But when the dentifrice was being dispensed on the bristles of the brush none fell off as a result of an excessive amount being dispensed.

What product did our observer use? It was Colgate's dental cream, which was just about the first of the pressure packaged toothpastes to reach the metropolitan New York area. Armed with P&G's "Gleem" and Lever's "Pepsodent," our observer when last seen was heading for the washroom.

As a footnote to this discussion, it is worth noting that in spot checks with drug stores in the New York area, pressure packaged dentifrices uniformly are meeting with a good consumer reaction. One druggist on Long Island reported that several of his customers who

had bought and tried pressurized toothpaste told him they liked it better than the product in the tube.

Although it is still much too early to say what the final consumer acceptance of aerosol toothpaste will be, the reaction in test markets has been good. Naturally pressure packaged dentifrice figures for the first year, at least, will be good, simply because pipelines have to be filled. But after that? One good sign, in addition to favorable reaction reported in limited checks, is the advertising and promotion the major marketers are able to put behind these "new" products. Already Colgate is blossoming out with large newspaper advertising space, and in color, to promote its product. The others, nine at last count, are not far behind. The outcome should be very interesting.

★

Powr-Pak Opens New Plant

Powr-Pak, Inc., Bridgeport, Conn., contract aerosol loader, late last month opened its new 110,000 square foot plant at 115 Howard Ave., Bridgeport. The new facilities are equipped with four new production lines with a daily filling

Harvey C. Tull, manager of aerosol products, Crown Cork & Seal Co., Philadelphia, looking over new valve and six-ounce Crown "Spratainer" cans in which nine major brands of toothpaste are now being packaged. Although pressure packaged toothpaste made its market debut only two months ago, already there are a number of brands on the market with many more on the way.



capacity of 350,000 aerosol units. The plant is divided into two aerosol areas—one for filling pharmaceutical products and the other for food filling.

Other facilities at the new plant include a railroad siding, four truck shipping platforms and three receiving docks.

A large sized storage area will accommodate five million empty aerosol containers as well as one million filled units. The plant also houses administrative offices and research laboratories, in addition to the 110,000 square feet of factory. The building formerly was occupied by Precision Steel Co.

Pharmaceutical Aerosol Lab.

A new aerosol research laboratory, to be devoted primarily to pressurized pharmaceutical development projects, was dedicated April 30th at the Columbia University College of Pharmacy, 115 W. 68th St., New York City. More than 200 persons attended the opening ceremonies.

The laboratory was built with the aid of a grant from Aerosol Techniques, Inc., Bridgeport, Conn., aerosol contract loader, headed by H. R. Shepherd, president.

Dr. Leonard A. Scheele, president of Warner-Chilcott Laboratories, and former Surgeon General of the United States, was the principal speaker at the dedication of the new unit.

The new facility is under the direction of Professor Joseph L. Kanig of the faculty of the College of Pharmacy. It will be utilized as a part of the graduate program for research projects involving the development of pharmaceutical pressurized dosage forms. The apparatus in the laboratory has been selected to provide the versatility required for the development and evaluation of aerosol pharmaceuticals and includes equipment for handling a variety of liquefied and compressed gases.

A major portion of the proposed research will be devoted to identifying and studying the vari-



Shown at opening of new aerosol research laboratory of the College of Pharmacy of Columbia University are, left to right, Leo Roon, chairman of the board of trustees of the college; H. R. Shepherd, president of Aerosol Techniques, Inc., Bridgeport, Conn., through whose grant the laboratory was installed; E. Emerson Leuallen, dean of the college; Dr. Leonard A. Scheele, president of Warner-Chilcott Laboratories and former Surgeon General of the United States; and Dr. Joseph L. Kanig of the college faculty, who will be in charge of the laboratory. Dr. Scheele was guest speaker at the opening day ceremonies.

ables affecting the stability and efficiency of medication in aerosol form. It is also contemplated that the research programs will seek to establish methods of quality control and evaluation procedures for pressurized formulations.

New Aerosol Loader

Aero-Fill Co., a division of Blakeley, Inc., Ranson, W. Va., is expected to begin operations shortly as a contract aerosol loader, it was learned late last month. T. L. Reilly, at one time associated with Edgerton & Reilly, Inc., Muirkirk, Md., contract aerosol loaders, and later with John C. Stafford & Sons, Inc., Baltimore contract packagers, is understood to be managing Aero-Fill. Products to be manufactured

by the new filler at its plant at Third Ave. in Ranson, include insecticides, room deodorants, shaving creams, hair lacquers and sun-tan lotions.

Canco Promotes Aerosols

Newly-formulated aerosol products were featured April 25 on the CBS network television news program, "Douglas Edwards With the News." Sponsored each Friday at 7:15 p.m. (EDT) by American Can Co., New York, the show displayed various Canco pressure containers used for packaging toothpastes and food products such as mayonnaise, cheese spreads, honey, jam and butterscotch. Actual applications of these products were also demonstrated.

Overall view of new Columbia University College of Pharmacy aerosol research laboratory. Laboratory was made possible by grant from Aerosol Techniques, Inc., Bridgeport, loader.



AEROCIDE DISPENSERS are proud to . . .



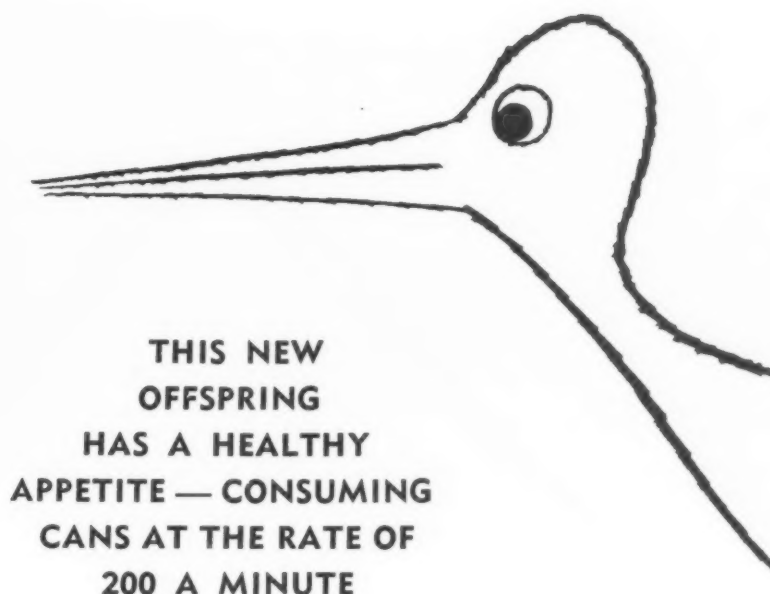
Pioneers in the field of aerosols, Aerocide Dispensers have presented all the latest pressure filling developments and as a result are today the largest pressure packagers in Canada.

Now we present the most revolutionary type of pressure container — the NITROGEN PRESSURE PACK.

This new package development may now make it possible to put your product under pressure. Our research and development department will be pleased to take your product and give you a complete analysis free of any obligation.

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announce a "blessed event" in the arrival of a **NEW**
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Aerosol growth has been both rapid and satisfying, but nevertheless the product of well-planned, exacting design. Valuable time can be gained through a proper program approach. Whether your Aerosol problem be technical, promotion, diversification or sales, qualified advice and guidance will prove most beneficial.

To assure success in this fast-growing, lucrative field, may we suggest that you investigate the services of a competent Aerosol staff.

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Carbide Names Husted

Appointment of Elbert E. Husted as sales manager of fluorocarbon propellants for Union Car-



Elbert E. Husted

bide Chemicals Co., New York, was announced recently by John R. Hulten, manager of fluorocarbon sales.

Mr. Husted will be in charge of the products' sales to the entire aerosol field. The appointment was announced simultaneously with Carbide's confirmation that it is

constructing a new fluorocarbon unit at Institute, W. Va., designed to produce 50 million pounds of fluorocarbons per year. The new plant is scheduled to go on stream in the fall.

Mr. Husted had served with Carbide from 1945 through 1950 as a technical representative in New York and Newark, N. J. He was concerned primarily with the marketing of synthetic organic chemicals. Since 1950, he was associated with a manufacturer of aircraft engineering equipment in quality control, sales and sales management capacities.

★

Aerosol "Gleem" in Ontario

Procter & Gamble Co., Cincinnati, has introduced its "Gleem" aerosol toothpaste to the Ontario, Canada market, it was announced recently. Advertising support for the new package includes television and dealer-cooperative newspaper advertising. Compton Advertising, Toronto, is handling the introduction of the product in Canada.

Leaders Pool Facilities

Consolidation of the production and research facilities of Aerosol Techniques, Inc., Bridge-



John Marana (left) and H. R. Shepherd

port, Conn., and Western Filling Corp., Los Angeles, was announced on May 1 by H. R. Shepherd and John L. Marana, presidents of the respective concerns. While associating their production and service forces the two firms will continue to function individually on the corporate, administrative and

Exploded view of OEL Aerosol Valve.



Positive operation
...no clogging with
the **OEL AEROSOL VALVE**

Simplicity is the keynote of the OEL Aerosol Valve. It has only three parts (see exploded view)—the nearest approach to integral construction of any aerosol valve. The unique rubber diaphragm insures accurate sealing, freedom from clogging, and positive action.

The OEL Valve is used on many well known spray and foam products. Interchangeable touch top fittings, easily assembled to the 1" cup, control flow rates and patterns. The same valve is used for both pressure and cold filling with proven results in uniform spray rates and patterns. Advantages are:

1. **Faster filling in pressure loading.**
2. **Minimum propellant loss.**
3. **Uniform flow rates due to "above-the-valve" control.**
4. **Safer with inflammable materials.**
5. **Simplified inventory control due to universal valve.**
6. **Mechanical break-up dispensing at no premium.**

The OEL Valve is now adaptable for products pressurized with nitrogen.

Send for information and samples to enable you to evaluate the OEL Valve on your products. Specify container size and dispensing fittings desired.

We are also manufacturers of precision equipment for pressure filling of aerosol containers.

MAY, 1958

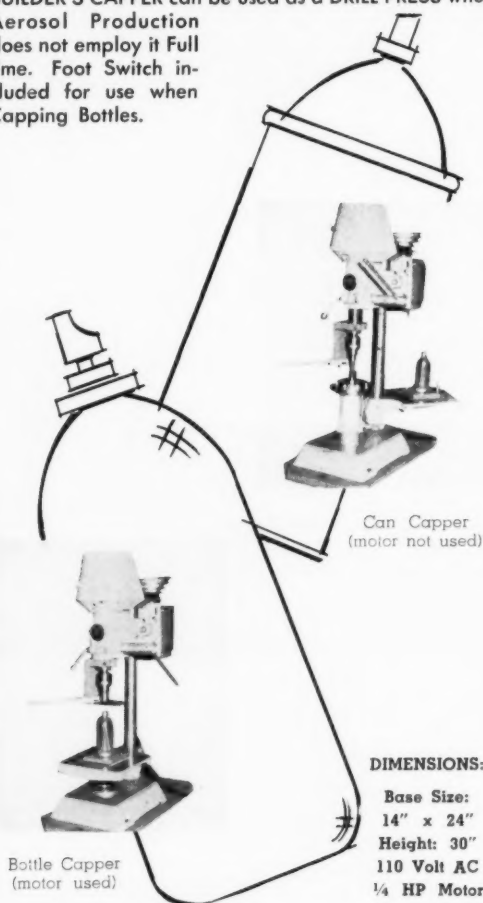
OIL EQUIPMENT LABORATORIES, INC.

600 PEARL STREET
ELIZABETH, NEW JERSEY

NEW COMBINATION CAPPER FOR AEROSOLS

BUILDER'S NEW "Combination Drill Press Capper" for Aerosol Bottles and Cans has a Production Rate of approximately 2 per minute with Aerosol Bottles . . . 8 per minute with Aerosol Cans.

BUILDER'S CAPPER can be used as a DRILL PRESS where Aerosol Production does not employ it Full time. Foot Switch included for use when Capping Bottles.



DIMENSIONS:

Base Size:
14" x 24"
Height: 30"
110 Volt AC
1/4 HP Motor

Aerosol Bottle Capper \$208.00
Can Capping Attachment \$160.00

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Formulation
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controls.
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and development.

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Store or ship your products in



CANS for CHEMICALS

a wide range of styles,
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POSITIVE PROTECTION

The variety of sizes and types of ELLISCO cans available to package your dry, semi-liquid or liquid products is almost as great as their uses. These popular containers are available in square, rectangular or round types with snug-fitting slip covers, single friction or double friction plugs, or screw caps to seal contents in, dust and moisture out.

ROUND CANS: 1/4" to 17 1/2" Diameters 1 1/2" to 30" Body Heights.

SQUARE CANS: 2 1/4" x 2 1/4" to 11 1/2" x 11 1/2" Base Dimensions. 2" to 12" Body Heights.

RECTANGULAR CANS: 2 1/4" x 1 1/4" to 7 1/4" x 5 1/4" Base Dimensions. 2" to 12" Body Heights.

Many types and sizes are available from stock. Special shapes and sizes can be made to order. Write, wire or call for full details.



ROUND SLIP COVER CANS
May be tape sealed if air tight closures are required.



LITHOGRAPHED CANS
Cans of all shapes and sizes may be lithographed in your design and color combinations.



ROUND CORNERED, SQUARE AND RECTANGULAR CANS

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SOAP and CHEMICAL SPECIALTIES

other levels. Together they will offer a combined filling capacity of 75,000,000 units annually, approximately one-fifth of the nation's output during 1957, and have a combined plant area of more than 150,000 square feet. One of the first major developments of the new association will be the establishment by ATI of an aerosol food division at Bridgeport.

★ **Installs Aeratom Unit**

The installation of the latest model "Aeratom" model #540 combination aerosol propellant charger and can crimper at its headquarters at 366 Broadway was announced last month by William A. Hoffman, Inc., aromatic chemicals, essential oils and flavors company. The Aeratom unit, for which Hoffman has exclusive representation and distribution in the United States, is fully automatic. Made by Aeratom, Ltd., Rapperswil, Switzerland, it features electronic control and is equipped with a "Preci" model filling head for Precision valves.

★ **New Methylene Chloride Use**

Solvay Process Division of Allied Chemical Corp., 61 Broadway, New York 6, recently announced that its methylene chloride is now safe for use as a propellant in cosmetic-type aerosols. According to the company, the product is dermatologically non-toxic and will not produce corrosion or reduce shelf life. It previously was used by manufacturers of non-cosmetic aerosol products.

★ **Adds Nitrogen Filling**

Facilities for the nitrogen pressure filling of a wide range of new products was announced recently by Aerocide Dispensers, Ltd., Weston, Ont., Canada. In making the announcement Carl D. Durant, president, said that the new plant specializing in nitrogen pressure filling is designed to fill cans at the rate of 200 a minute. Products to be filled include toothpaste, chocolate syrup, coffee concentrate, tea, toppings, vitamins, pharmaceuticals,

Dr. Toome Joins Old Empire

Dr. Hedwig Toome has been appointed to the laboratory staff of Old Empire, Inc., Newark, N. J.,

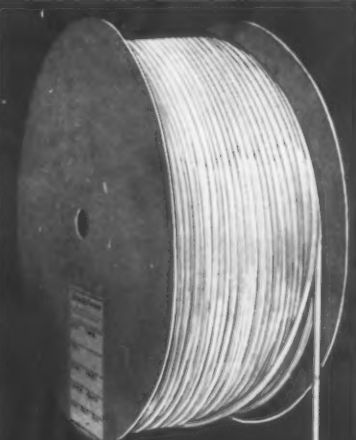


Dr. Hedwig Toome

as assistant research chemist in aerosols, it was announced recently. Dr. Toome previously was engaged in pharmaceutical work in Bonn, West Germany. She received her Ph.D at the University of Vienna.

nose drops, hair creams, sweeteners, shampoos, hand lotion, etc.

Fred Lodes, head of Lodes Aerosol Consultants, Inc., New York, off to Europe aboard the Queen Mary on April 14. Returning late in April Mr. Lodes reports on the status of various aerosol groups in Europe, which he contacted as a representative of the Chemical Specialties Manufacturers Association. His report was made during a meeting of the CSMA board of governors at the association's 44th midyear meeting in Cincinnati.



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... Now available in
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Available on spools in lengths up to 3000 feet. Prevent costly delays—save time and money.

HYDRALENE NO. 35 polyethylene tubing will not split or crack even with tight friction fits.

Features:

- Only finest quality virgin material.
- Close tolerances.
- Withstands severest tests for non-splitting or cracking.
- Also available in coils or cut pieces.

This tubing is the result of years of careful development work in the aerosol field.

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NEW BREAK-UP VALVE OFFERS SPRAY HEAD FOR QUICK, POSITIVE



LIGHTER, WIDER Newman-Green pattern gives best operation. Such efficient dispersement increases customer acceptance for your aerosol products.

EXCLUSIVE COLOR-CONTRASTING IDENTIFICATION OF ORIFICE OPENING

Newman-Green Valve Can Color-Match Your Package, Gives Mistier Patterns to Hair Sprays, Colognes and Lotions

Newman-Green offers you another exclusive valve feature in the new mechanical break-up aerosol valve tip. Because of the two-tone spray head, you can locate the direction of the spray pattern immediately. No other valve gives you this feature. The availability of a variety of colors offers you the chance to color-coordinate the valve head with your package design. In addition, the new valve head produces a uniform pattern that is finely atomized. And, the broader spray gives a warmer end product, making it more desirable to aerosol customers.

The built in quality of the Newman-Green valve design pays off in your pro-

duction line too. All valves are completely tested before leaving the plant. Thus, individual spray testing during filling operation is eliminated. The costly inventory problem is solved too when you buy Newman-Green quality valves. Since the basic valve unit is always the same, you need only to keep different spray heads in stock. And the spray heads are all interchangeable in seconds.

For all kinds of designing, engineering, and manufacturing of aerosol valves use Newman-Green. The quality you get pays off in even better aerosol packages for today and the future.



STICKY, THICK sprays of other valves distract from your product. Protect your product with quality Newman-Green valves.

Newman-Green offers a complete line of aerosol valves. For a new price schedule and free samples fill in this coupon and mail to . . .

NEWMAN-GREEN, INC.

151 Interstate Road
Addison, Illinois

Name _____ Position _____

Company _____ Address _____

City _____ State (Country) _____

Valve Application _____

NEWMAN-GREEN

Creative Aerosol Valve Engineering

151 Interstate Road, Addison, Illinois



"Market information proves the sales possibilities of aerosols ... helps create new business for my customers"

says C. Earle Kimble of Du Pont

"Market-survey information developed by Du Pont provides marketers and prospects with the guidance they need to prepare and sell aerosol products profitably," says Mr. Kimble, salesman for Du Pont's "Freon" Products Division. "And new sales possibilities of aerosols mean new business and increased sales for my custom filler accounts. **"Here's an example** of what I mean. When I received Du Pont's report on the cologne market, I immediately brought it to the attention of Parfums Ciro, a large marketer of colognes and perfumes. They made the information from Du Pont into a special report on their 'Essent Mist' Aerosol Cologne, which was sent to their salesmen throughout the country. With this marketing information, the sales force was able to achieve the most profitable year for aerosol colognes in the company's history. This meant a large contract for the custom filler who packaged their colognes."

Whether you're a loader or a marketer of

aerosol products, you can take advantage of the sales-building services which Du Pont offers. In marketing, Du Pont surveys develop information to help you expand sales of your products. In national advertising and promotion, Du Pont works continuously to build markets for aerosols, bringing you a steady flow of new customers.

In addition, Du Pont's know-how and experience are available for technical help with aerosol development or production problems. And, in manufacture of "Freon", Du Pont offers aerosol propellents unsurpassed in quality, performance and properties. Du Pont maintains the industry's fastest propellant delivery schedules from three plants and a country-wide network of warehouses.

If you have a problem in any area of aerosol development, production or marketing, call or write the Du Pont office nearest you. And be sure to buy Freon* for all your propellant needs.

EARLE KIMBLE, shown at left with Raymond L. George, Vice President of Parfums Ciro, Inc., was born in Wilmington, Delaware. After studying Business Administration at Goldey Business College, he joined Du Pont in the Accounting Dept., in 1932. Earle was transferred to the "Freon" Products Division in 1941. Here he received a thorough background in properties and uses of "Freon", preparing him for his next job as one of Du Pont's first salesmen of "Freon" aerosol propellents. Being a pioneer salesman in the propellents field, Earle learned firsthand the special problems involved in development of the aerosol market. Today, Earle Kimble is one of Du Pont's sales representatives in the East, where his long experience is available to help marketers and custom fillers in his area with their problems.

*E. I. du Pont de Nemours & Co. (Inc.)
"Freon" Products Division 315
Wilmington 98, Delaware*

BRANCH OFFICES

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Chicago 3, Illinois

701 Welch Road
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FREON® *propellents*

*Freon and combinations of Freon- or F- with numerals are Du Pont's registered trademarks for its fluorinated hydrocarbon propellents.



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... THROUGH CHEMISTRY**

SOAP and CHEMICAL SPECIALTIES

Production...

EQUIPMENT • MATERIALS • PROCESSING

Book Reviews

Production Clinic

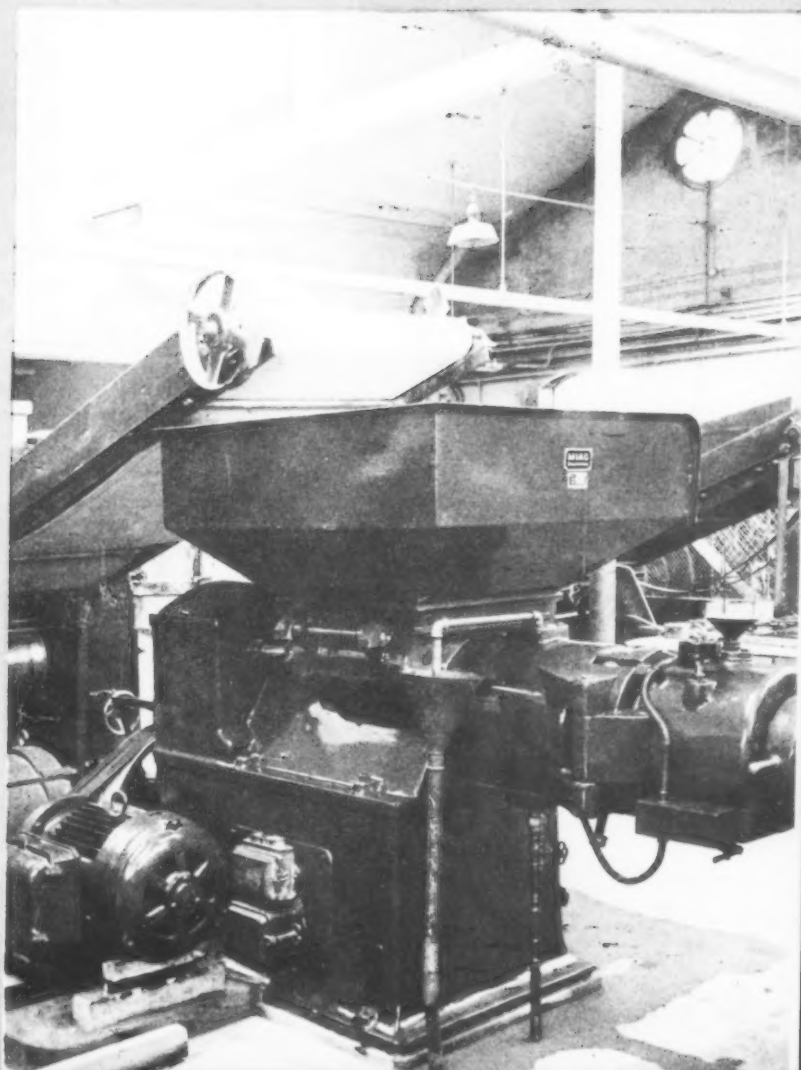
Soap Plant Observer

Products and Processes

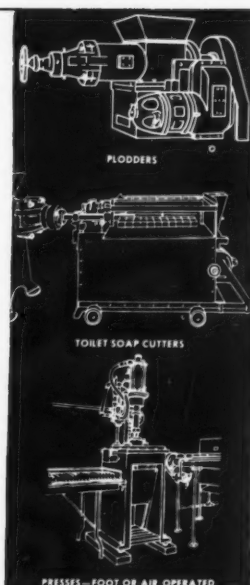
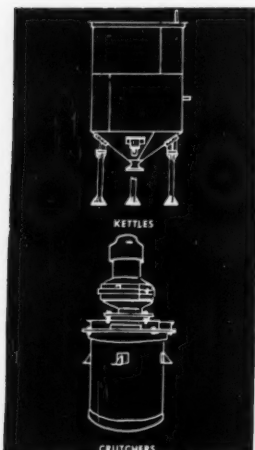
New Patents

Bulletins and Equipment

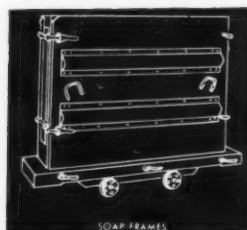
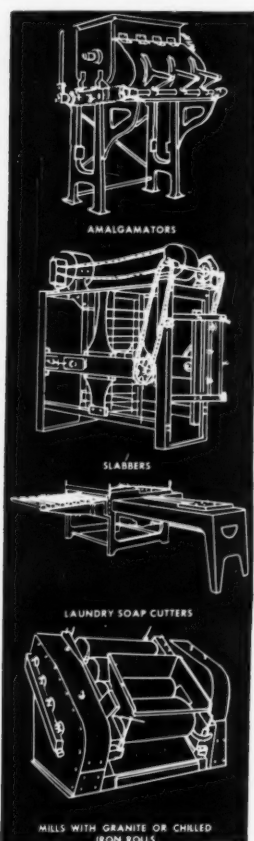
In the traditional toilet soap making installation the mass is homogenized by passing through at least two, sometimes three roller mills. The milled soap is conveyed to the crutcher, as shown here, whence it is extruded as a solid bar of soap ready to be cut (See p. 187).



OVER



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Manufacturers of soap making machinery for over a century.

Production SECTION

Modernization of

European Toilet Soap Making

A HIGH standard of living depends directly upon industrial productivity. One of the most obvious and promising means of stepping up both is the improvement of production methods. Having accepted this view, European industry is exhausting all means at its disposal to increase per capita output of the individual by installation of new and modern machines and apparatus. How far this aspect of its industrial economy has been lagging in the past is apparent from the comparative ease with which production costs can still be cut by the adoption of up-to-date processing methods and machinery. Initial expenditures on such plants are rapidly amortized and the proportion of capital outlay to profits is very favorable.

Problems of productivity are being attacked not only among large scale producers. Every effort is being made to raise the technological level of the middle-sized and small manufacturer. This tendency explains in part the amount of scientific attention currently focussed upon the soap industry. The soap maker's trade saw no changes for many decades. Suddenly, an astounding number of basic technological changes are unfolding in rapid succession. Most of these innovations effect such important improvements in product quality and economy that every soaper is forced to come to terms with the changes they have wrought in his trade.

In the past the concept of the markets of the soap industry was a divided one: low priced, mass-merchandise made by larger man-

ufacturer and expensive, luxury soap manufactured by the middle-sized or small soaper. This view was based on poorly working machines of high capacity for mass production, and well trained skilled and specialized personnel for small scale output of luxury items. The notion of the divided market is dead today because of technological improvements.

The advent of modern processing equipment has changed the soap plant from an alchemist's kitchen working with jealously guarded secret recipes into a modern factory, where chemist and engineer pool their efforts to improve formulations and processes.

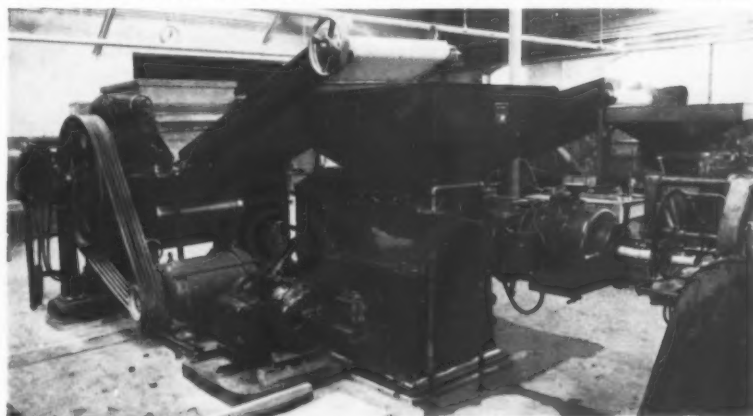
Increasing process efficiency entails constant speeding up of throughput, which, in turn, means shortening of the route from raw

material to finished product. Application of this principle to industrial practice is rarely simple and requires good understanding of the general situation combined with complete familiarity with every individual phase of the processing techniques involved. Frequently no more than a minor and unimportant change in formulation is needed for continuous processing to replace a batch process that had previously appeared to be the only solution. The large scale rancidity phenomena experienced when ribbon driers were first introduced is a good example of this interdependence. In this case the trouble was due to the soapers' unwillingness to raise the free alkali content of the finished soap by even the smallest percentage, although it had been established that no adverse

By Heinz Zilske

MIAG Muehlenbau und Industrie G.m.b.H.
Braunschweig, Germany

Figure 1. Homogenized toilet soap passes from roller mill (left) to the crutcher (center) whence it is extruded in continuous bar form (extreme right) to be cut and stamped.

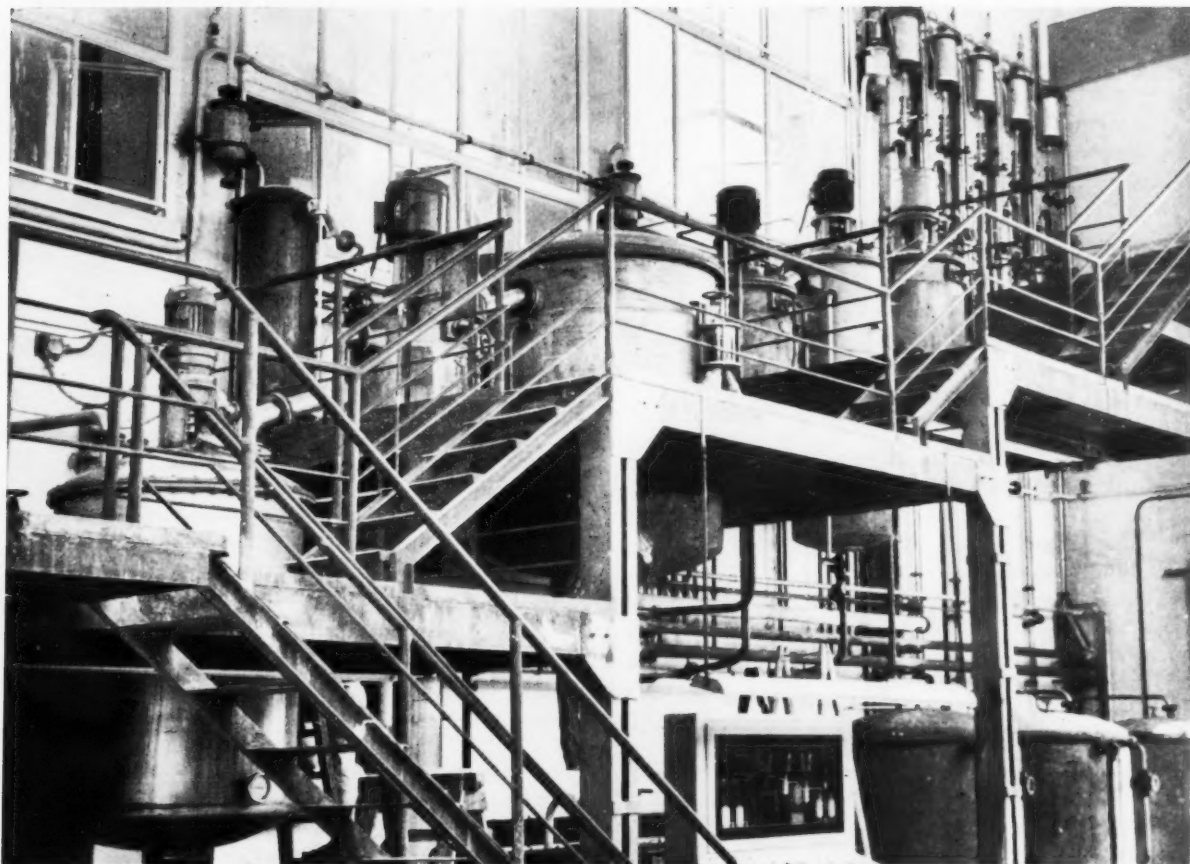




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skin effects would be caused by such a minor change.

Ribbon Driers

In the traditional process finished soap is conveyed from the kettle to a ribbon drier where about 20 per cent moisture is removed. In these driers ambient air is passed over steam coils and heated to 40 to 50 centigrades. The hot air is then driven by an exhaust fan through three or four tiers of moving steel screens. On these screens thinly rolled out ribbons of soap travel continuously from tier to tier. When the soap has reached the end of one screen it drops, face down, to the next lower one, and so on.

This widely used drying system is uneconomical. First, the heating of air by passage over steam coils requires disproportionately large quantities of steam. Only a small percentage of the soap's moisture is removed by the warm air, which is then, largely unused, released into the open. Newer installations of this type mix part of the used warm air with fresh cold air and repress the mixture over the coils. This arrangement improves the economy of the drier. However, it still falls short of satisfying engineering standards.

Ribbon driers of this type continue to be commonly built and sold, although their results are also unsatisfactory from the chemist's point of view. Chips dried by this method vary widely in fatty acid content. This may give rise to such flaws as cracking or premature disintegration of bars when in use. Serial tests showed moisture variations ranging up to 14 per cent.

Instead of attempting basic improvements in toilet soap making, such as the use of more efficient driers, soap manufacturers accepted ribbon driers as a fixture and tried to compensate for their shortcomings by other devices. One of these is storage of the dried soap chips in a silo for a period of 24 to 36 hours, during which time partial equalization of moisture is accomplished. However, this procedure

introduces into the toilet soap making process a bottle neck which turns all attempts at efficiency into a mere illusion.

From the silo the chips travel on automatic conveyors over mounted scales to the mixers or amalgamators where the soap is intimately blended with color, perfume, and superfatting agents. Usually the soap is then passed through two or three roller mills, where the mass is thoroughly homogenized. Thence it goes to the cutter and finally to the press (Figure 1).

After stamping, the soap bars are stored once more. They are placed on trays to permit escape of heat accumulated in the interior of the cake. This heat might cause sweating and efflorescence of the packaged product. Tray storage is another bottle neck which breaks up and slows down the continuous flow of the process. At one time this step seemed inevitable. After cooling the soap bars are packaged by machine.

With slight variations this routine was followed by nearly all toilet soap makers until the larger manufacturers made serious efforts at building greater efficiency into their production methods. Trained specialists were consulted and produced technological improvements which resulted in astonishing econ-

omies. Soap firms which did not take cognizance of these advances were in many instances unable to compete and had to discontinue operations.

Drum Driers

We shall now endeavor to survey briefly developments of the past few years which finally lead to the continuous milling of soap. The drum drier, because it uses far less steam and requires less space, is an advance over the ribbon drier installation. However, it is hardly possible to maintain the same temperature for any length of time over the entire width of the drum. This is a serious shortcoming because it results in considerable differences in the fatty acid content of the chips. Attempts at compensating for the lack of temperature uniformity included the graduated arrangement of the scraping knives. In this way certain parts of the soap (in the center) remained on the drum longer than the marginal parts. These attempts were not entirely successful.

The scraping knife itself is a frequent source of serious trouble. Although it is pressed firmly against the cylinder by means of adjusting screws, it has to be sharpened frequently. A knife insufficiently sharp leaves an almost invisible soap film on the drum. The high temperature of the drum burns away the film rapidly and may cause stains in the final product.

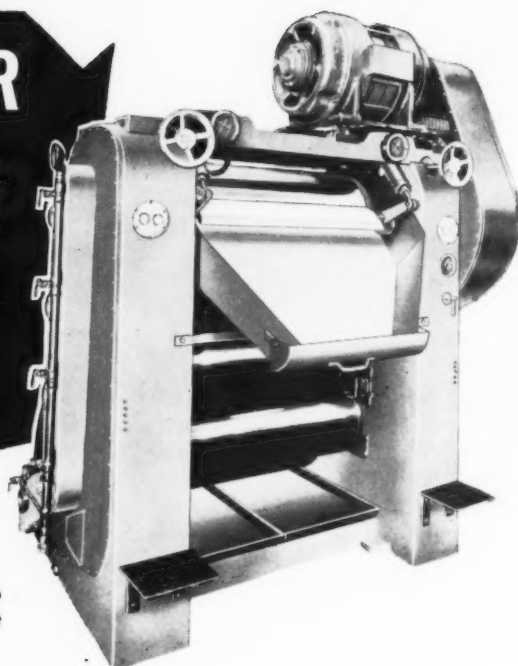
Insufficient and slow temperature adjustment is another disadvantage of the drum drier. The drums are large and accordingly have considerable heat storage capacity. They respond slowly to any attempt at regulating the temperature.

Another drier system which was short lived called for placing the liquid soap in a tank. One wall of this tank consisted of the rotating drum. Next came the drum-spray drier method, which involved spraying the liquid soap onto the hot cylinder. This creates a thin film from which the moisture is removed very rapidly. From the

Figure 2. Top soap bar shows effect of over-dried soap particles. Center and bottom bars are uniformly dried and well homogenized products.



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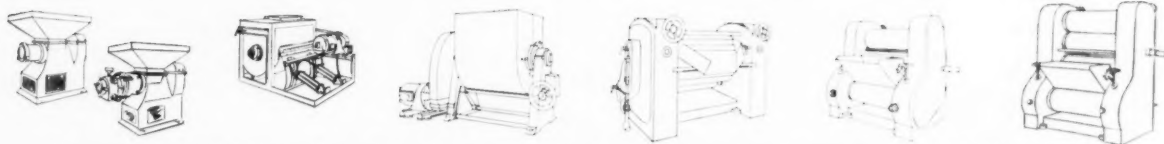
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spray drier the soap usually travels to cooling cylinders, so that the chips reach the silos at room temperature which avoids flaws caused by heat of compression. Drum driers found only limited acceptance in spite of their advantages in thermal economy over the ribbon drier. Disadvantages in processing, largely rooted in the heat sensitive characteristics of the soap have prevented their general acceptance.

Vacuum Driers

Vacuum driers became available after World War II. Initially, they were used to make household soap. When bar form household soap was largely displaced by soap powders other uses for this fairly expensive equipment were sought. After a few modifications the vacuum drier was found suitable for toilet soap manufacture. Because of their economic advantages over previous drying systems, vacuum drier installations found ready acceptance. The first such installation for processing toilet soap was designed by an Italian firm. German made vacuum driers for toilet soap have been on the market for about a year.

Characteristics of the vacuum dried product were long shrouded in secrecy. Today we know that it is an 80 per cent soap in ribbon form which includes a certain percentage of over-dried particles having an excessive fatty acid content. These particles are so hard that a roller mill can't crush them. They are actually capable of forcing the rollers apart. They survive in the finished soap bar (Figure 2) where they are more resistant to manual rubbing than the surrounding soap and give the consumer the impression he is using an abrasive soap. Variation of the fatty acid content in the sprayed and solidified particles is due to their difference in size.

In addition, a fine anhydrous dust is formed in the vacuum drier, which, in theory, is completely removed. In practice, however, considerable amounts of this powder

settle in places which are not touched by any dust removing device. This dust layer remains in the vacuum chamber much longer than the bulk of the soap, builds up, and drops at irregular intervals into the mass leaving the chamber. Mixers cannot handle this hard material and it remains in the finished soap in the form of hard and easily distinguishable nodules.

A number of practical solutions to cope with this problem are offered. German models use rollers and homogenize the semi-solid soap at the moment of hardening. Italian designed units concentrate the soap in the vacuum drier only up to 73 to 74 per cent, then mix it with color, perfume and other additives and finally pass the mixture through a series of two or three vacuum double plodders. Every soaper will recognize that this procedure will result in a uniform product. The cost is considerable and may be out of proportion to the capital investment.

Furthermore, this installation is feasible only for fairly long runs of the same bar soap because cleaning the perforated disks in the vacuum plodders takes several hours. The vacuum causes the fatty acid content to be raised slowly from about 74 to 80 per cent. This involves risk of perfume loss along with the escaping moisture, since

many of the fragrance materials are more volatile than water.

Expansion Driers

The balance of all these considerations produced an expansion drier which works on a different principle. It dispenses with prolonged silo storage of dried soap chips and thus makes possible continuous processing of toilet soap.

The "Miag" expansion drier (Figure 3) works as follows: The liquid soap base travels through a metered pump and filter to a heat exchange unit where it is briefly heated from 80 to 170 centigrades. Hot fluid soap then passes through a magnetic filter which removes iron particles down to one micron and the soap is conveyed to an expansion tank. This vessel is slightly pressurized (approximately 1.2 atm. over pressure) to exclude air and all possible reactions with any of its constituents (carbon dioxide, for instance). Up to this point conditions are the same as those in the vacuum drying installation described above. This means a slight increase in free alkali which must be kept in mind for the final stages of soap production. Baffles in the expansion tank are arranged so that only soap-free vapor reaches the condensation area. Most of it is condensed here, the remainder escapes through the roof.

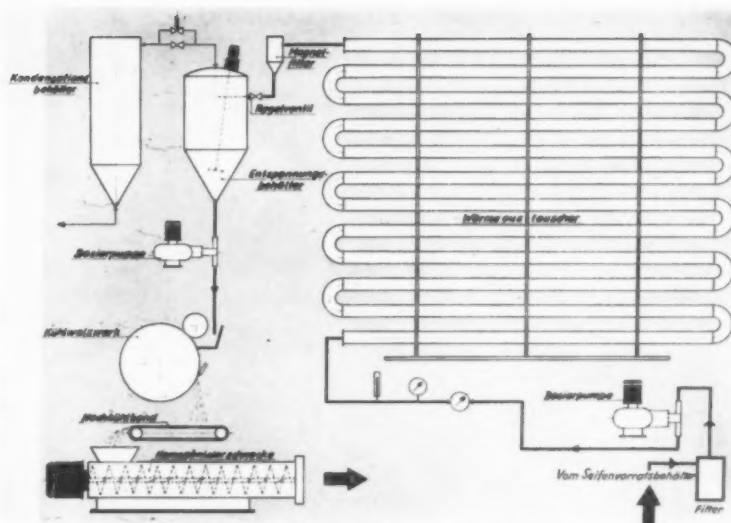


Figure 3. Diagram of expansion drier.

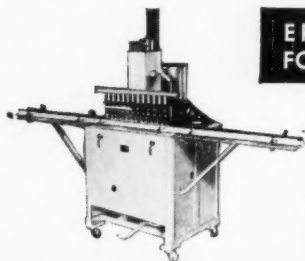
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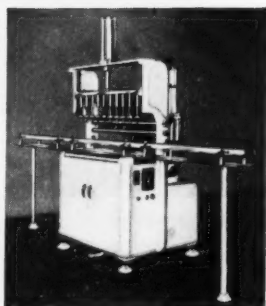


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In this system lowering of pressure and temperature permit spontaneous escape of the moisture without solidification of the soap. This, in turn, permits equalization by blending of the differences in fatty acid content caused by spraying. For this purpose the expansion chamber is equipped with a powerful stirrer. In addition, the material remains for a minimum of 10 minutes in the chamber because of the presence, at all times, of a 250 kilo reserve of soap at the bottom of the tank. A metered pump continuously draws a certain quantity of soap from the expansion vessel and conveys it to the receiving tank of a cooling mill which is especially designed for this purpose. Normally the soap leaves the expansion tank with a fatty acid content of 75 per cent. This is increased to 78 per cent after passage over the cooling cylinders. The increase is accomplished by transition of the soap from the liquid to solid state without addition of energy. This principle has been known for some time but has never been fully utilized before.

Installations of this type offer a number of advantages. Since no vacuum is required, initial cost and operating expense are lower than those of a vacuum drier. Furthermore, soap made by this process has fairly uniform fatty acid content. Therefore it can be worked without prolonged intermediate storage in a silo. Texture of the soap is free from all brittleness. It is tough and has a high degree of plasticity. Such a soap offers no problems in further mechanical processing. These characteristics result entirely from the mode of crystallization. When dried and solidified under vacuum, crystallization takes place in an agitated medium (the mass is boiling). In other industries this process is actually used for the express purpose of producing very fine crystalline powders. When passing through the expansion drier, the soap is crystallized more slowly, and long threads are formed which make for improved plasticity.

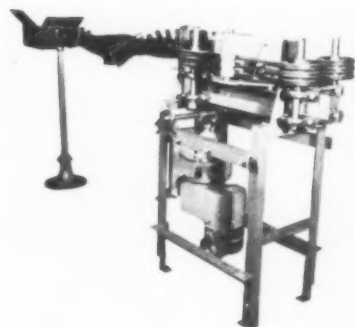
Another advantage of this system has become apparent very recently. Gradual cooling in the expansion drier, and especially its interruption at about 110° C., encourages formation of the beta phase. It also avoids excessive hardening of the soap, giving the finished bar improved foaming power. In the vacuum drier, heating is followed almost immediately by solidification, which causes a certain amount of hardening. The finished soap does not respond fast enough to rubbing action by the user and foam improvement caused by increased beta phase formation is never realized.

The installation, shown in Figure 3, as a diagram, has already undergone some modifications. The system of coils used as heat exchanger has been replaced by a considerably smaller and more efficient unit. The new unit has the added advantage that it can easily be switched to higher capacity. The cooling cylinder can be replaced by another cooling installation which excludes all contact of soap with air prior to solidification. A specially designed crystallization section has been built into the process which permits modification of the soap's crystalline structure after cooling. This has been done on the basis of experiments which showed that working of the soap immediately after moisture removal and solidification is not to be recommended.

(To be continued)

New Island Twister

A newly-designed powered twister for handling round containers with diameters of from 1½



to 5½ inches, was introduced recently by Island Equipment Corp., 27-01 Bridge Plaza North, Long Island City 1, N. Y. Called "Styl-O-Matic," the new unit features spring-loaded backup plates and V-belts, which may be set for any desired size adjustment. Formerly, it was necessary to change the sheaves and V-belts when making the adjustments. Although the powered section may be adjusted to size, a different twister section is required for each size container handled.

New Anti-Corrosion Agent

A newly-developed anti-corrosion ingredient, said to prevent spotting of highly finished metal surfaces by perspiration or fingerprints, has been added to the protective skin lotions manufactured by Milburn Co., 3246 East Woodbridge, Detroit 7. The new material is dispersed in a water-soluble plastic film which is deposited on the skin by evaporation of the firm's "Ply No. 9," liquid.

As the worker perspires, his perspiration is said to carry with it a portion of the corrosion retardant from the water-soluble film. This is claimed to counteract the salts, acids and moisture of the perspiration. The new ingredient is also claimed to be impervious to solvents, cutting oils and kerosene.

Home Water Conditioner

A rapidly soluble complex phosphate for water treatment in private homes, institutions and other water systems was introduced recently by Calgon Co., division of Hagan Chemicals and Controls, Inc., 323 Fourth Avenue, Pittsburgh 30, Pa. "Instantreat" is intended for use with solution feeding equipment for the automatic treatment of systems with flow requirements up to 10,000 gallons per hour. Calgon is offering a chemical feed pump with valves, strainer and suction tubing for use with the phosphate to provide a sterile feed solution.



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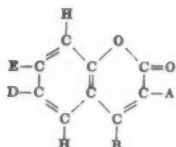
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NEW Patents

The data listed below is only a brief review of recent patents pertinent to the readers and subscribers of this publication. Complete copies may be obtained by writing to the publisher of this magazine, Mac Nair-Dorland Co., 254 W. 31st Street, New York 1, N. Y., and remitting 50c for each copy desired. For orders received from outside of the United States the cost will be \$1.00 per copy.

No. 2,824,824. Insect Repellent and Method of Stabilizing Same, patented by Lyle D. Goodhue, Bartlesville and Kenneth E. Cantrel, Dewey, Okla., assignors to Phillips Petroleum Co., Bartlesville. This patent teaches a method of stabilizing an insect repellent composition comprising as an essential ingredient a compound selected from the group consisting of the diethyl-, di-n-propyl-, and di-n-butyl esters of pyridine-2,5-dicarboxylic acid and mixtures thereof which comprises adding thereto a compound selected from the group consisting of compounds having the formula:



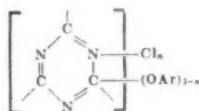
and mixtures of said compounds wherein A is one of hydrogen, bromine and chlorine, B is one of hydrogen and an alkyl radical containing not more than three carbon atoms, D is one of hydrogen, hydroxyl and a nitro radical, and E is one of hydrogen, hydroxyl, an alkoxy radical containing not more than three carbon atoms, and an amino group in which the hydrogen is substituted by not more than two alkyl groups containing not more than three carbon atoms and when E is an alkoxy radical, B is hydrogen.

No. 2,826,529. Miticidal Composition of Dialkyl Chlorophosphates and Method of Use, patented by Hymin Shapiro, Detroit, Mich., assignor by mesne assignments to Pittsburgh Coke & Chemical Co., Pittsburgh, Pa. A method of combating mites is disclosed comprising treating the mites externally and the mite habitats with a miticidal composition comprising diethyl chlorophosphate together with an inert surface active miticidal adjuvant as a carrier therefor.

No. 2,826,551. Nontangling Shampoo, patented by Henry C. Green, Grand Rapids, Mich., by mesne assign-

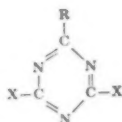
ments to Simoniz Co., Chicago. Described is a hair shampoo adapted to form a hair cleansing and anti-snarling liquid with water, comprising as essential ingredients; between about 15-99.6% by weight of a water-soluble detergent; and between about 0.4-17.0% by weight of a liquid linear polysiloxane of the class consisting of polydimethylsiloxanes, polydiethylsiloxanes, polymethyl-phenylsiloxanes have a viscosity at 25° C. of between about 5-2,500,000 centistokes, the amount of detergent present being at least about twice the amount of polysiloxane.

No. 2,824,823. Triazine Fungicidal Compositions and Method of Applying, patented by Calvin N. Wolf, New York, assignor by mesne assignments to Pittsburgh Coke & Chemical Co., Pittsburgh, Pa. Disclosed is a fungitoxic composition consisting essentially of a fungicide having the general formula:



wherein Ar is a radical selected from the group consisting of phenyl, naphthyl, hydrocarbon-substituted phenyl, hydrocarbon-substituted naphthyl, chloro-substituted phenyl and chloro-substituted naphthyl radicals, and n is an integer from 1 to 2 inclusive, an inert fungicidal adjuvant as a carrier therefor and a surface active agent.

No. 2,822,313. Fungicidal Compositions Containing Aryl Dihalo Triazines, patented by Kenneth G. Nolan, Noroton Height, Conn., and William B. Hardy, Bound Brook, N. J., assignors to American Cyanamid Co., New York. Described is a preparation for the control of fungi comprising a symmetrical triazine represented by the formula:



in which R is an aryl radical selected from the group consisting of phenyl, naphthyl, alkylphenyl, monohalo-phenyl, dihalophenyl, hydroxyphenyl, and alkoxyphenyl and X is a halogen selected from the group consisting of chlorine and bromine, and a fungicidal adjuvant therefor, said adjuvant comprising a surface active agent.

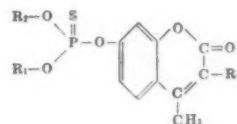
No. 2,824,826. Protecting Objects from Rodent Attack, patented by Constantine Katsaros, Lake Geneva, Wis., and Andrew A. Baldoni, Woodstock, Ill. This patent covers a method for protecting an object from rodent attack, comprising encompassing the object with a rodent repellent barrier comprising a material selected from

the group consisting of 2,4,6-trinitrotoluene, 2,4,6-trinitrotoluene-beta naphthol complex, 2,4,6-trinitrotoluene-o-anisidine complex, 2,4,6-trinitrotoluene-alpha naphthylamine complex and 2,4,6-trinitrotoluene-acenaphthene complex, and a carrier therefor.

No. 824,039. Fungicidal Composition, patented by Kenneth S. Karsten, Westport, Conn., assignor to R. T. Vanderbilt Co., New York. A dry powdered fungicidal composition is covered comprising at least about 25 percent by weight of sodium pentachlorophenate and containing from about 0.5 to about 4 percent by weight of a highly aromatic hydrocarbon oil comprising methylated naphthalenes characterized by an unsulfonated residue not exceeding about 30 percent and an initial boiling point not less than about 350° F.

No. 2,826,528. Halide Polyalkylacrylic Compositions, patented by Morris V. Shelanski, Atlantic City, N. J., and Murray W. Winicov, Philadelphia, assignors to West Laboratories, Inc., Long Island City, N. Y. Described is a preparation for the control of microorganisms consisting essentially of a halide from the group consisting of iodine, iodine chloride and iodine bromide and a polyalkylacrylic compound having at least ten units of alkylacrylic acid in the molecule.

No. 2,826,530. Synergistic Insecticidal Compositions Comprising an O,O-Di-Alkyl Thiophosphate-4-Methylumbelliferone, patented by Gaines W. Eddy, Corvallis, Oreg., and Edward F. Knippling, Arlington, Va., dedicated to the free use of the People in the territory of the United States. The invention consists of an insecticide comprising a mixture containing as a toxicant an organic phosphate having the formula:

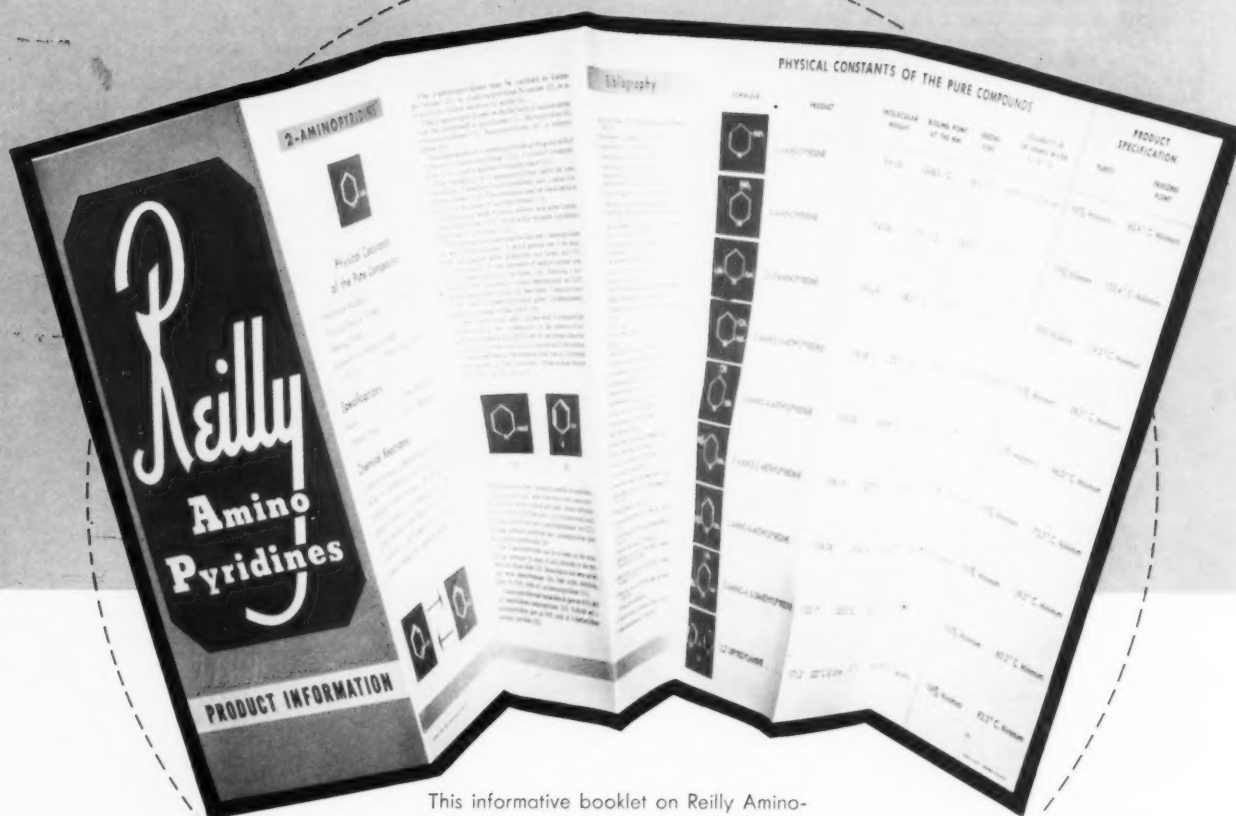


wherein R1 and R2 are identical alkyl radicals selected from the group consisting of methyl and ethyl, and R3 is a member of the group consisting of hydrogen and chlorine and, as a synergist therefor, a member selected from the group consisting of 1,2-methylenedioxy-4-[2-(octylsulfinyl) propyl] benzene and the alpha-isopropylpiperonyl ester of chrysanthemum monocarboxylic acid, said toxicant and synergist being present in the proportions of about from .0025% to .005% of toxicant to .025% to .05%, respectively, on the synergist.

Diversey Earnings Lower

Diversey Corp., Chicago, recently reported a decline in income and earnings during 1957. Net income amounted \$471,060, equal to share earnings of \$1.79. This compared with \$526,832 and \$2.04 in 1956.

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Products and PROCESSES

New Shampoo Base

A new shampoo base was announced recently by Dehydag, Duesseldorf, Germany. "Texapon BS" is a sodium lauryl polyglycol ether sulfate formulated with a luster forming, a brightening, and a foaming agent. Like all Dehydag products it is distributed in this country exclusively by Fallek Products Co., 165 Broadway, New York 6. "Texapon BS" is suggested for use in emulsion shampoos, is said to possess good temperature stability from 6°C. to 60°C. Its lustrous appearance is maintained in dilutions with seven parts of water and more. The product contains 22 per cent washing active substance, has a specific viscosity of 3000 cp/20°C., and 6 to 7 pH in one per cent dilution. A basic formulation might contain "Texapon BS" 50 per cent, water 49 per cent, and sodium chloride one per cent.

★

Transparent Soap

A good transparent glycerine soap has approximately the following composition, according to Karl Bergwein, writing in the February, 1958 issue of *Dragoco Report*, published by Dragoco, Inc., New York:

	Kilos
Pressed tallow	9.800
Coconut oil	21.300
Castor oil	11.500
Soda lye 38°Be	21.300
Alcohol 95 vol. %	14.700
Glycerine 28°Be	2.800
Refined sugar crystals	12.200
Salt	0.200
Water	6.200
	100.000

To obtain soap of good transparency and stability in storage the highest grade fats, clear lyes and total saponification are required. Final alkalinity of glycerine soaps is adjusted 0.1 per cent higher than that of "de luxe" soaps. This fact must be taken into account in perfuming these soaps, because some perfumes cannot tolerate alkalinity exceeding 0.05 percent. Since glycerine soaps are perfumed at about 65 to 68°C., the effect of sustained

heat on the perfume material must also be taken into consideration.

The perfume oil is mixed with equal parts of alcohol prior to incorporation in the soap. After perfuming, the soap must be rechecked for alkalinity and moisture content and the necessary corrections made. Glycerine soap should be run into frames at the lowest possible temperature—about 60 to 65°C. in winter and about 55°C. in summer. Transparency improves with speed of solidification. This is why shallow frames are used for glycerine soap.

Dyes added to these soaps must be resistant to alkalis and must not fluoresce. Perfume oil is added in amounts of about 0.8 to one per cent.

Waste chips left over from previous batches may be fed into the finished soap for dissolving. However, these chips are usually very dry and their addition requires special adjustment of the liquid proportions. Every 100 kilos of waste chips usually calls for 10 to 15 kilos of alcohol-water mixture. If the finished soap forms a thick surface layer after being left to set for some time in the kettle, more liquid is required.

The alcohol content brings the transparent glycerine soap closer to true solution. For this reason attention must be paid to good fixation of the perfume oils. Clearly soluble extracts of benzoin, storax, labdanum, opoponax, etc. are suitable fixatives.

— ★ —

Compressed Gases Data

Pressure packaging of food with carbon dioxide and nitrous oxide is described in a new 24-page illustrated brochure which has just become available from Air Reduction Co., 150 East 42nd Street, New York 17. Entitled "Facts on Gases Used for Food Products" the booklet includes information on sources, properties, selection, and handling techniques.

Syndets in Hydrocarbons

The state of dispersion of commercially used detergent additives in lubricating oil and other hydrocarbons is not the same as that of the pure grade detergents which have frequently been investigated in the past. In an effort to obtain realistic and detailed data, ultracentrifugation, viscosity measurements and electron microscopy were used in a comparative investigation covering calcium petroleum sulfonate and lead alkylbenzenesulfonate as representatives of the type commonly incorporated in hydrocarbons, and di-ethylhexyl sodium sulfo succinate ("Aerosol O.T." American Cyanamid Co.) as an example of the pure detergents. Procedures and results are reported by J. B. Peri, California Research Corp., Richmond, Calif., in the March issue of *J. Am. Oil Chemists Soc.*, pp. 110-7.

Most of the published data on this subject have been obtained on soaps and detergents which are relatively pure chemical entities, according to the author. While importance of studies on such pure materials is obvious, it is equally desirable that detergents actually used in lubricating oils be studied directly. These compounds are less homogeneous in structure.

Ultracentrifugation and viscosity data indicate that the sulfonate type detergent normally exists in hydrocarbon solvents as small micelles, approximately two molecular lengths in diameter, ranging in shape from nearly spherical to rodlike. In the case of calcium petroleum sulfonate the micellar size is shown to change with concentration and temperature. Analysis of the sedimentation patterns shows that, while "Aerosol O.T." appears essentially monodisperse, calcium petroleum sulfonate exhibits a marked distribution of micellar weights. Ultracentrifugation and electron microscopy show that larger aggregates may result from association of various polar compounds with the detergent micelles.

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Quaternaries Test Paper

A new test paper for determining concentrations of quaternary ammonium compounds in aqueous solutions was introduced last month by Cargille Scientific Inc., 117 Liberty Street, New York 6. Designed for control of sanitizing solutions in eating establishments "Hydrion T" paper serves as a reliable indicator for concentrations of 100 to 400 ppm of "Roccal" (Sterwin Chemicals, Inc.) and "Hyamine" (Rohm & Haas Co.) types of quaternaries. Color charts are included with the paper which comes in rolls and in envelopes, as desired.

Densifier for Fine Powders

The density of fine powders can be controlled at any level by a new method and equipment available for licensing from J. M. Huber Corp., Borger, Tex. The new densifier was developed by Huber to reduce the bulk of one of their finely divided pigments. It has been used for tonnage production of 75 per cent DDT concentrates, kaolin clays, and similar materials. In commercial practice the density of these powders is said to be increased by as much as 100 to 200 per cent. The final product is

claimed to be less dusty and more economical to package and transport.

The process removes entrained or occluded air from fine, powdered materials by the simultaneous application of vacuum filtration and mechanical compression to a regulated and continuously moving product stream. The equipment is claimed to have low power requirements and to need little operating supervision.

Huber has patented the process and equipment (U. S. Patent No. 2,806,771) and has installed a pilot densifier for processing sample materials for the benefit of interested parties.

New Pneumatic Nozzle

A newly-designed pneumatic spray nozzle (Model 1/4 JDL) for mounting on all walls, regardless of thickness, was introduced recently by Spraying Systems Co., Bellwood, Ill. The unit may be mounted by drilling one hole for entry of the nozzle cap and drilling and tapping four one-quarter inch holes for the fastening screws. The product is available in air and fluid nozzle styles, in either brass or stainless steel, with rear shut-off

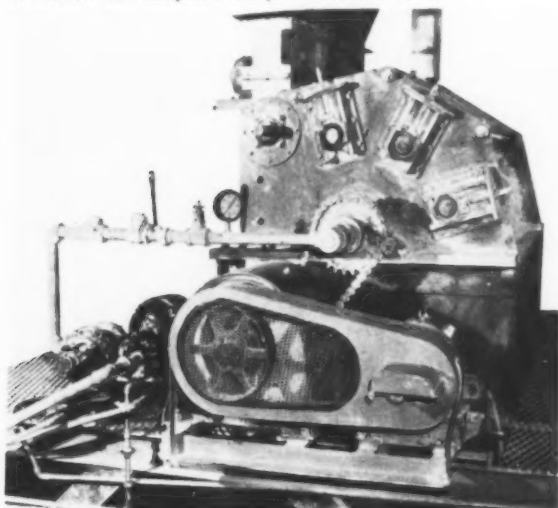


needle, clean-out needle, or with plug only. Said to be leak-proof, the nozzle is suitable for use in numerous industrial installations.

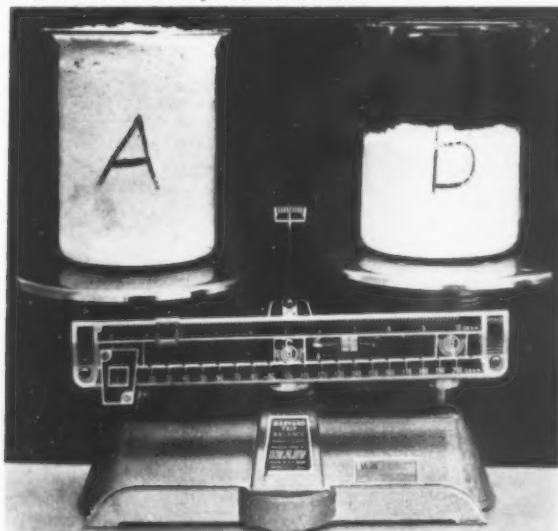
Handcleaner Evaluation

Work on evaluation of 15 waterless handcleaners by Donald J. Birmingham and Vernon B. Perone (WADC Technical Report 55-467, Jan. 1956) was used as an illustration for the testing of topical products in general. Dr. Birmingham spoke at the March 5 meeting of the New York Chapter of the Society of Cosmetic Chemists. He is medical director and chief dermatologist of the United States Public Health Service, Occupational Health Field Headquarters, Cincinnati. In his talk he reviewed and analysed the program of labo-

New densifier developed by J. M. Huber Corp., Borger, Tex., de-aerates and compacts fine powdered materials.



Comparison of material, at same weight, showing reduction of bulk to one-half through use of densifier.



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ratory and field tests on which the handcleaner evaluation for the U. S. Air Force was based. One of the points he stressed was the importance of adequate field trials to support results of laboratory and standard use tests.

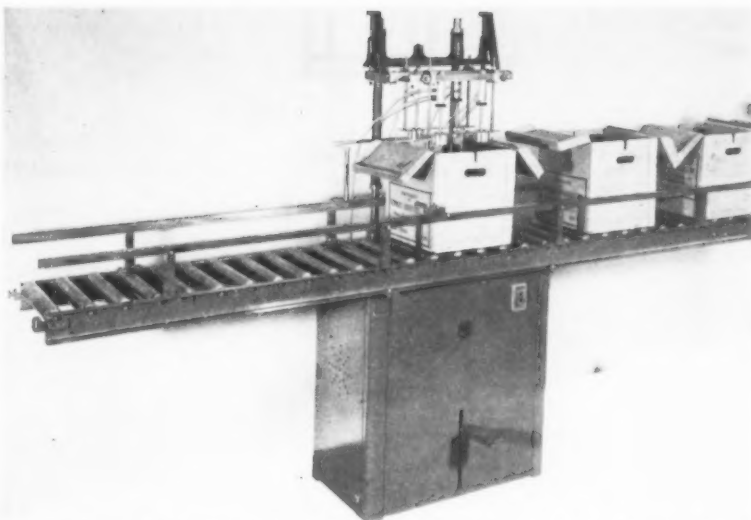
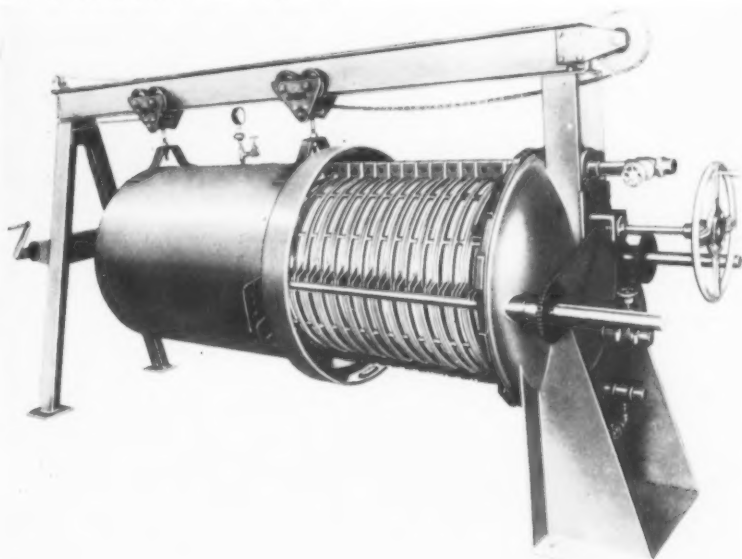
—★—

Versatile Pressure Filter

A novel pressure filter which employs vertical filter leaves in a horizontal cylindrical tank was introduced recently by T. Shriver & Co., 808 Hamilton Street, Harrison, N. J. Unlike conventional vertical leaf filters, this unit is designed for use with any sheet form of paper or textile filter medium and with frames in much the same manner as a filter press. As an alternative the installation can be used as a precoat filter or for other purposes where the wire mesh of the leaf is used as the filter medium itself. The frames are then omitted and spacers with ring gaskets are substituted.

The Shriver design is said to eliminate many of the difficulties experienced in cleaning other filters of this type. In addition to versatility and virtually unlimited choice of filter medium, the manufacturer claims a high degree of efficiency for this filter.

Shriver vertical leaf horizontal tank pressure filter can be used with frames (as shown) and with any filter medium in sheet form to clarify and recover filter cake. Unit can be used without frames as a precoat filter.



New redesigned and improved filling machine, recently announced by Perl Machine Mfg. Co., Brooklyn, N. Y., is capable of handling carton-packed bottles up to one-gallon in size. Unit is available in gravity and liquid fill types, or a combination of both.

New Perl Filling Machine

A newly-designed filling machine for handling carton-packed bottles up to one gallon in size was introduced recently by Perl Machine Mfg. Co., 68 Jay St., Brooklyn 1, N. Y. Designated Model "CF," the unit is available in either gravity or vacuum fill types. Bottle changeover, within the machine's filling range, is said to be accomplished quickly and easily.

The unit also comes with a

roller gravity or motorized conveyor mounted on top of a cabinet, which houses a heavy duty fan on the vacuum models. Conveyor guard rails are adjustable to handle all sized cartons. A special regulating valve permits setting the vacuum to any desired height.

—★—

Dow to Make Allyl Alcohol

Addition of allyl alcohol to its line of industrial chemicals was announced recently by Dow Chemical Co., Midland, Mich. The material to be made at Dow's Freeport, Texas Division is used as an intermediate in the production of resins, flavorings and perfumes. It also functions as an intermediate for such esters as allyl isothiocyanate, diallyl phthalate, allyl caproate and allyl methacrylate. Containing both a double bond and a primary hydroxyl group, allyl alcohol will react both as an olefin and as a primary alcohol. As produced by Dow, the product has a minimum assay of 98 per cent.

—★—

New Rhodia Booklet

Rhodia, Inc., New York, recently published a guide describing applications of its "Alamask" odor control chemicals. The products are specifically designed for use in sewage plants. Copies of the booklet may be obtained from Rhodia, 60 East 56th St., New York 22.

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SOAP PLANT *Observer*

By John W. McCutcheon

CONSTRUCTION of a soap and detergent spray tower and how its details affect quantity and quality of the final product will be set forth below. This column will elaborate on the general study of spray tower engineering presented last month.

Capacity of a tower is governed by the amount of water it can remove from the slurry in a given time. For instance: 2,000 pounds of slurry an hour are fed into the tower; the slurry contains 65 per cent solids; if complete dehydration were to be achieved the tower would have to remove 700 pounds of moisture; the end product however is to contain eight per cent moisture; the tower therefore evaporates 586 pounds per hour. Obviously product output by a certain tower in a certain time varies with the characteristics of the slurry and of the final product to be made. It is logical therefore to rate tower capacity by moisture removal rate rather than by product output.

Volume of water removed is a direct function of the volume of air passed through the tower times the air temperature at the inlet. For example: 10,000 cubic feet per minute (c.f.m.) of air at 450° F. remove 500 pounds of water per hour; the 15,000 c.f.m. at the same temperature will remove 750 pounds per hour and, conversely, 5,000 c.f.m. at 450° F. will remove only 250 pounds per hour. If the temperature is raised from 450° F. to 500° F., tower capacity will be increased roughly in proportion. As an approximate rule of thumb it may be assumed that the (mathematical) product of the temperature of air at inlet expressed in degrees Fahrenheit multiplied by the air volume passed through the tower expressed in c.f.m. tends to be constant.

Tower diameter and height,



properties of the slurry and particle size desired in the final product must be kept in mind when setting the rate of air circulation. This statement will be illustrated below.

In a counter current spray drying tower the hot air rises against the fall of the bead. The rate at which water is removed from the soap particle tends to decrease as the particle falls and as the surface moisture is removed. Time is required to permit the moisture encapsulated inside the bead to reach the surface. When the soap bead arrives at the bottom of the tower its moisture content is not uniform. It will be equalized later. As the particle progresses down the tower it will meet higher air temperatures which will compensate somewhat for the fact that the bead becomes more difficult to dry as it falls.

The stream exhausted by the tower is the sum of the air injected plus the vaporized moisture removed from the slurry, which has a cooling effect on the air. The temperature gradient between the air entering the tower and the air at the outlet is therefore an almost direct function of the water taken up by the air and represents a measure of tower efficiency. For exact calculation the heat loss of

the tower itself must be considered.

In most tower operations the temperature difference amounts to a drop of 200° F. or more. Careful control of air temperature both at the inlet and outlet are essential to efficient operation. Inlet temperature can be regulated directly through adjustment of the furnace heat. Outlet temperature must be controlled indirectly by rate of air flow, and by insuring uniform flow rate, composition and temperature of the slurry.

The effect of slurry composition and rate of flow upon tower efficiency is generally recognized. Both factors affect directly the quantity of water per hour which the tower must handle. Slurry temperature usually receives less attention, which is a serious mistake, since it acts directly upon viscosity, which in turn influences the rate of flow and the kind of bead formed at the spray nozzle.

Let us assume the slurry temperature at the nozzle is kept below 212° F., say at 190 to 200° F. and this slurry meets the rising air stream having a temperature of 250° F. Overall conditions in the tower (excepting viscosity) would not be greatly influenced by this slurry temperature. However, drying conditions would be greatly changed, if the slurry's temperature at the nozzle were raised to 230° F., because the water present in the formula would be released as steam immediately when the pressure drops to normal. Characteristics of the end product would be greatly altered. Control of nozzle temperatures is therefore very important.

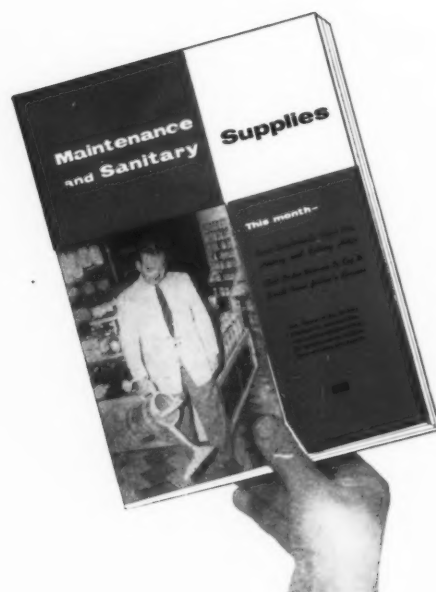
Air flow through the tower must be kept within certain reasonable limits, as will be apparent from a few illustrations. In a tower, 60 feet high, having a diameter of 20 feet, passing 20,000 c.f.m. at 450° F. and exhausting 250° F., the average air rise would be 0.85 feet per second.

$$\left(\text{Rise} = \frac{16000}{60} \times \frac{\text{tower area}}{1} \right).$$

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A bead of detergent measuring approximately 0.5 mm in diameter, would fall approximately 30 feet per second. The effect of tower air velocity on the overall drying period of the particle would be comparatively small, tantamount to adding 1.7 feet per second to the free fall of the bead. If, however, the tower measured 10 feet in diameter, air velocity would be 0.85×4 or 3.4 feet per second. In our 60 foot countercurrent tower this would be equivalent to increasing the effective free fall of the particle by 6.8 feet per second or more than 10 per cent. In a concurrent tower of the same dimensions this would be equivalent to decreasing the effective tower height by the same percentage. In actual practice, air velocity affects drying time in the tower even more strongly than is apparent from these calculations, because the fall of small particles is slower than that calculated above from Stokes law.

Correct balance between particle size, air temperature and air flow is a result of careful engineering based on actual experience of tower behavior. This study merely attempts to show some of the factors involved and their magnitude.

The tower should be designed so as to impart a swirling motion to the air stream. This motion not only increases the length of fall slightly, but — more important — it produces a mixing action of air and bead, which improves uniformity of final product. The swirl must be gentle to avoid centrifugal action which might throw the detergent into excessive contact with the tower wall. This effect is usually achieved by louvers placed at the plenum ring of the countercurrent tower or at the inlet duct of the concurrent tower.

Nozzle size, design, and the method of use play a very important part in the spray drying process. The nozzle should emit a uniform, cone shaped spray. How many nozzles may be installed, is determined largely by the diameter of the tower and the pressures under which they will operate. Usual

number of nozzles is four to six, but there may be as many as 20. A nozzle of given diameter will handle greater flow at elevated pressures (2,000 p.s.i.) than at pressures in the range of 500 p.s.i. Nozzle orifices may vary widely but usually range from $1/8$ to $3/16$ th of an inch. Cones may overlap up to 50 per cent.

High pressures usually give fine sprays which dry quickly into dense products. Lower pressures,

400 to 800 p.s.i., yield lighter densities. Flow rate of the slurry through the nozzle greatly affects operating conditions in the tower, as pointed out above. For instance, the same tower will make an eight per cent moisture product when operating at 2,000 p.s.i. and 325° F. and a 12 per cent moisture end product when operating at 1200 p.s.i. and 400° F. A decrease in flow rate (lower pressure) yields larger size particles. The increase



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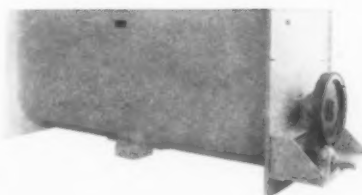
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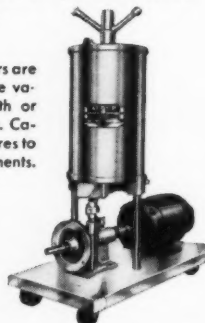


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in temperature does not suffice to dry these as thoroughly as the smaller bead at a lower temperature.

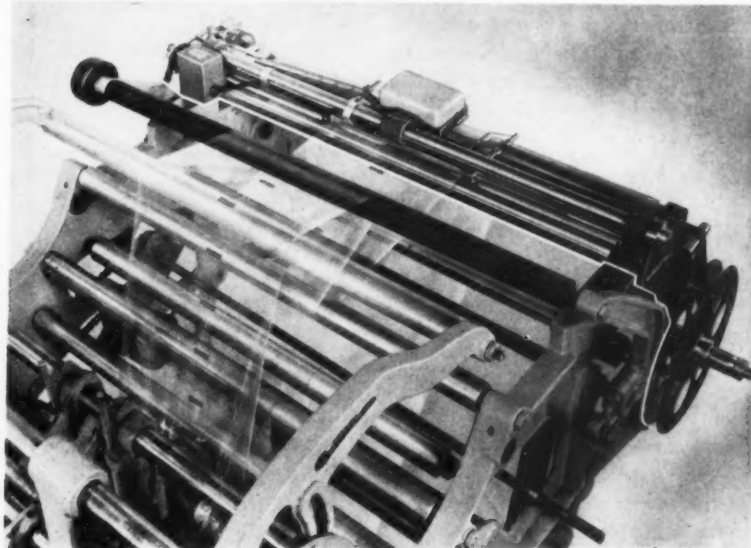
Auxiliary air or steam at the nozzle is frequently added but such practice is not recommended for the successful production of modern type beaded products. Such measures may be necessary only under special conditions, such as lack of high pressure pumps or of adequate slurry heat exchangers, screening, etc.

— ★ —

New Gottscho Imprinter

A new wrapper imprinting attachment for bundling, pouch and bag-making machines, recently introduced by Adolph Gottscho, Inc., Hillside, N. J., is designed for inkless imprinting of code-dates, prices and related copy on wax paper and other hard-to-print packaging materials. Called "Wrap-A-Printa," the unit uses roll leaf instead of inks. This provides clear and rub-proof prints and eliminates ink drying problems on wax, paper, polyethylene, cellophane, coated foil and similar materials, according to the manufacturer. The unit is automatic and requires only one adjustment to register imprints on any desired part of the package. The roll leaf is available in black, white, yellow, red, blue and green.

New wrapper imprinting attachment for bundling, pouch and bag-making machines, recently introduced by Adolph Gottscho, Inc., Hillside 5, N. J., is designed for inkless imprinting of code-dates, prices and related product copy on wax paper and hard-to-print packaging materials. Called "Wrap-A-Printa," the unit uses roll leaf instead of inks.



Novel Homogenizer

A new tool for dispersion, emulsification or blending was introduced recently by Buschman



Overall view (left) of new "Jet-Mogenizer" of Buschman Products, Inc. Disassembled stator, rotor and headpiece, at right.

Products, Inc., 369 Lexington Avenue, New York 17. The "Jet-Mogenizer" is said to combine impact, attrition, turbulence, and ultrasonic cavitation for liquid/liquid and liquid/solids blending. This multiple action results in smooth and uniform emulsions and very complete dispersions, according to the manufacturer who also claims speed and economy for the machine. It is suggested for dispersing and emulsifying insecticides and other products intended for pressure dispensing. Buschman says that use of the "Jet-Mogenizer" can eliminate the need for filtering in a number of chemical specialties processes.

In the "Jet-Mogenizer" ultra-

sonic effect is achieved by mechanical means. The number of splines in the rotor and stator is different. By this device the flow of the material is converted from a constant rhythmic vibratory pattern into an intermittent variable one. The resultant irregularity in pressure impulses sets up sub-sonic effects and greatly intensifies turbulence. Violent interparticle attrition follows as the fluid mass is forcibly impacted through the restricted spline vents. At a peripheral velocity of 4,500 f.p.m. the whirling processed particles vibrate at ultrasonic frequencies as they are impinged on the sonic blade. At this frequency continuous cavitation is generated within the processed particles.

The blender comes in three sizes and in vertical and horizontal mounting. It is available with controlled automatic continuous feed of dry material combined with predetermined metering of liquids.

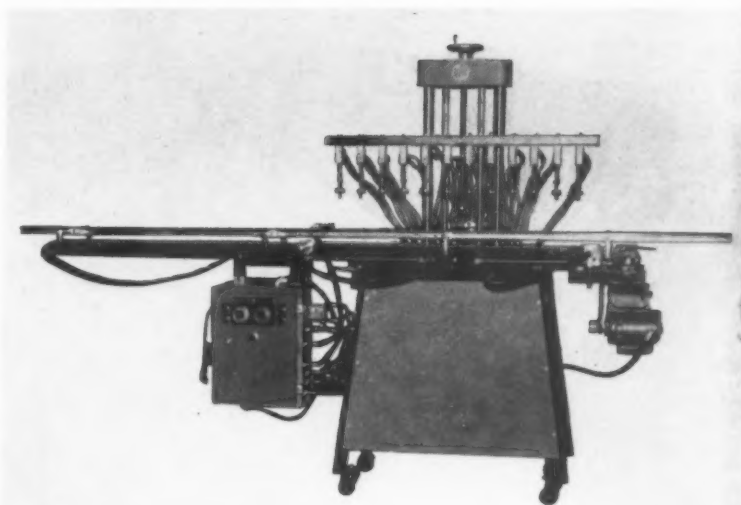
New D&O Brochure

A new 36-page brochure containing a complete listing of its essential oils and aromatic chemicals was published recently by Dodge & Olcott, Inc., 180 Varick Street, New York 14. The booklet also contains product data on the company's line of balsams, concentrated flavors, oleoresins and certified colors, for use in the chemical specialties and allied industries. Copies may be obtained from D&O.

New Paddle Mixer

A new low cost flexible paddle-type mixer was introduced recently by U. S. Forge & Foundry Co., Pulaski, N. Y. "Supermix" is an adaptation of a design originally developed for the mixing and blending of foundry sands.

The drum and agitator are usually furnished in carbon steel but can be supplied in corrosion resistant materials where necessary. Mixing elements available include paddles, rolls, scrapers, and cutting discs. The drum may be hot or cold jacketed and equipped with electric or gas heating units. The agitator



Latest model PVA straight line fully automatic vacuum liquid filler of Packer Machinery Co., Brooklyn. Equipped with two separate motors, and a vacuum pump, the unit is available in eight, 10, 12, 14 and 16 stainless steel spout assemblies with valve type interchangeable nozzles and special centering if necessary. The unit fills all types of foamy and still liquids, hot or cold, into containers ranging in size from fractional ounces to quarts. The machine can be adapted to handle gallon size containers. The dimensions of the new model PVA include: conveyor length, 15 feet; conveyor height from floor, 35 inches (adjustable); length of main body of machine, 42 inches; depth of main body of machine, 36 inches, and height of machine, 72 inches.

enters the drum through liquid-tight seals. The machine comes in capacities of two, four, six, 12, 24 and 50 cubic feet.

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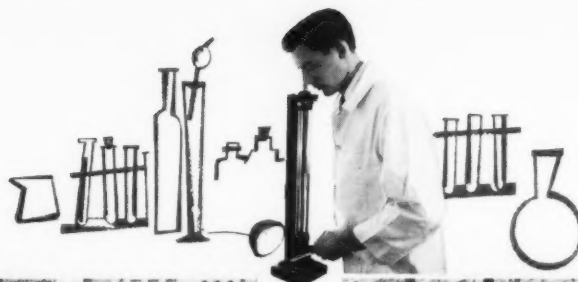
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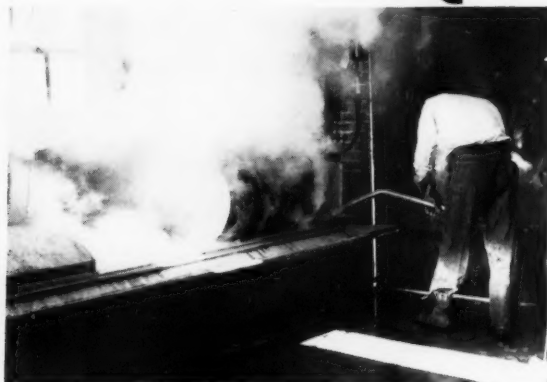


Samples for quality, clarity and color are taken, and sent to the laboratory prior to unloading any tank or transport.



Separate lines for each product eliminates any contamination.

QUALITY



Drums are washed in a boiling caustic bath, rinsed then air-blown to assure a dry container.



Each drum is candled to protect the product against any foreign matter.

These are a few of the quality controls that keep your Solvent or Chemical On-Specification.

Products of the Solvents and Chemicals Group: Aliphatic Naphthas, Alcohols and Acetates, Amines, Aromatic Solvents, Chlorinated Solvents, Glycerine, Glycols and Glycol Ethers, Ketones, Oils and Fatty Acids, Plasticizers, Resinates-Sodium and Potassium, Rosins-Gum and Wood, Stearates, Terpene Solvents, Waxes.

Bulk plants located at Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Fort Wayne, Grand Rapids, Houston, Indianapolis, Kansas City, Louisville, Milwaukee, New Orleans, St. Louis, Toledo and Windsor, Ontario, Canada.

Look for the SC seal in the "Yellow Pages" of your directory under the "Solvents" or "Chemicals" listing. Or write:



THE SOLVENTS AND CHEMICALS GROUP

2540 West Flournoy Street • Chicago 12, Illinois

ATTENTION!
all floor wax
manufacturers!



*Formerly Gersthofen
(I.G. WAXES)

WAX KPS/2106
EMULSIFIER SYSTEM NOW MAKES POSSIBLE
a new type self-polishing
floor wax WITH THESE UNSURPASSED ADVANTAGES

- Milky-White in Appearance . . . Forms Glossy Film . . .
Never Discolors Tiles.
- A NONIONIC SELF-LEVELING SYSTEM . . . Requires NO
ALKALI SOLUBLE RESIN ADDITIVES.
- COMPATIBLE with Wide Range of Polymers.
- FREEZE-THAW STABLE to AT LEAST 5 CYCLES.
- Possible to Manufacture as a FLUID, STABLE, 40% SOLIDS
Product. Yields EXCEPTIONAL FREIGHT SAVINGS when sold and
shipped as a Dilutable, Concentrated DRY-BRIGHT FLOOR FINISH.
- BUFFABLE and REMARKABLY TOUGH.

For Further Information, Samples, and Prices, Write or Call . . .

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Do you make

Solvent hand cleaners?

Then ask for our list of
special covering odors.

Fresh pleasant fragrances
designed to remove the
sharp notes of the solvents.

*We offer perfume compounds
and masking agents for
technical and industrial use.*

Whatever your odor
problem may be . . .

Consult

Schimmel & Co., Inc.

601 West 26th Street, New York 1, N. Y.

News

PEOPLE • PRODUCTS • PLANTS

Lever Bros. Buys "Air-Wick"

* * *

McArthur C-P Superintendent

* * *

Johnson Advances Larsen

* * *

Hooker Acquires Shea Chemical

Craig Davidson, formerly marketing vice-president, has been appointed vice-president of product planning for Purex Corp., South Gate, Calif. He heads the newly formed product planning division, which is responsible for new product development. (See p. 221)





Will you polish off this \$200 billion market?

Don't let anyone sell you the idea that there's a recession in home building.

It's a whopping market for your wax emulsion polish—and it's going to get a lot bigger.

Newest and most comprehensive forecast figures available, just released by *Architectural Forum*, conservatively estimate more than one million new housing units will be started *this year*. Apartment construction in 1958 should top 100,000 units.

By 1967 you'll have more than 58 million U.S. households in your market. As a result, 1.5 million new housing starts a year will be as common as 1 million are today. Apartment construction alone will be running at a rate of 200,000 to 300,000 units a year!

Will you help to put the shine on this dazzling market?

Maybe there's a Durez resin that can help you do it. Hardness, leveling, gloss retention, water resistance, shelf life—there's hardly a property of wax emulsions these terpene phenolics haven't enhanced.

They're compatible with vegetable, mineral, and synthetic waxes. Their stable price helps you keep in-

redient costs in line.

What you really buy with these resins is *experience*—37 years of helping processors get the right combination of qualities.

You can't get this experience anywhere else. To tap it now, ask us for samples of Durez wax-emulsion resins that may turn the whacking of hammers into sweet sales music for you.



PLASTICS DIVISION

HOOKER ELECTROCHEMICAL COMPANY

405 Walck Road, North Tonawanda, N. Y.

SOAP and CHEMICAL SPECIALTIES

News

C-P Advances McArthur

Appointment of A. C. McArthur as superintendent of its Don soap plant was announced recently



A. C. McArthur

by C-P Co., Toronto, a division of Canada Packers, Ltd. For the past two years he was assistant plant superintendent. Previously, he had served in the fatty acids department.

Texize Names Waters

Thomas L. Waters has been named field sales manager for the consumer products division of Texize Chemicals, Inc., Greenville, S. C., manufacturers of liquid household cleaning and laundry products. With Texize since 1947, Mr. Waters previously was assistant sales manager, a post he held since 1955. He also had served the company as Georgia supervisor of sales and division manager for Georgia, Alabama and Florida.

Buchanan in New Post

Ben F. Buchanan has been named associate director of product development for the research center of General Foods Corp., Tarrytown, N. Y. Dr. Buchanan will be responsible for development of new products and processes, quality control, investigation of raw materials and development of by-products. Prior to joining

GF last fall, Dr. Buchanan had been associated with International Minerals and Chemical Corp., as manager of pharmaceuticals and technical service. General Foods manufactures "S.O.S." scouring pads and "Tuffy" dishwashing aids.

New P&G Alkaline Cleaner

A new alkaline cleaner designed for a variety of industrial and laundering uses was introduced recently by Procter & Gamble Co., Cincinnati. Called "Polo," the new product is a blend of synthetic detergents and alkaline builders. It has a pH of approximately 11.7 in a one per cent water solution at room temperature. "Polo" may be used on metal surfaces, including aluminum, according to P & G. The product comes in 50-pound multi-wall paper bags and is now being marketed nationally.

Johnson Advances Larsen

Edward W. Larsen has been named manufacturing manager for S. C. Johnson & Son, Inc., Racine, Wis., it was announced recently. He will work under Robert P. Gardiner, vice-president. Mr. Larsen had been production manager since 1954. Prior to that, he was associated with Procter & Gamble Co., Cincinnati, as production supervisor.

Edward W. Larsen



Colt Joins Lever

Appointment of Edward D. Colt as assistant research director in charge of the technical services



Edward D. Colt

department of the research and development division of Lever Brothers Co., New York, was announced recently by Dr. Willard M. Bright, research and development director. Mr. Colt formerly was technical director of the soap division of Armour and Co., Chicago, and has had wide experience in the fields of soaps, detergents and fatty acids. In his new capacity, he will be concerned with the division's analytical and manufacturing standards activities. He is a former chairman of the glycerine research committee of the Association of American Soap and Glycerine Producers, Inc.

B&W Chemical Relocates

B&W Chemical Co. has moved to a newly-constructed plant at 25920 Belle Porte Ave., Harbor City, Calif., it was announced recently by H. C. Brumbaugh, president. The firm formerly was located at 14526 South Garfield Ave., Paramount, Calif. The new plant will house B&W's administrative offices and complete production facilities for the manufacture of floor waxes, liquid soaps, cleaners and disinfectants.

Geigy Appoints Tobin

William W. Tobin has been appointed technical sales representative in metropolitan New York



William W. Tobin

and Connecticut for Geigy Industrial Chemicals, a division of Geigy Chemical Corp., Ardsley, N. Y. Mr. Tobin will continue as New England sales representative, a post he has held since November, 1956. He joined the company in January, 1955 and served in the firm's technical service group.

Horan in New Post

Lawrence J. Horan has been named manager of the southeastern division of National Starch Products, Inc., New York, it was announced recently by S. F. Thune, vice-president of adhesives. Mr. Horan will headquarter in Atlanta and will be responsible for operations of the adhesives, paper and textile sales and technical service

Lawrence J. Horan



groups. His territory includes Virginia, North and South Carolina, Georgia, Alabama, Florida and eastern Tennessee. From January, 1956 until his present appointment he was district supervisor of New York sales. He joined National Starch in 1950 as a salesman in adhesives and after three years was transferred to resin sales. He was named supervisor of midwest resin sales in 1955.

Hooker, Shea Plan Merger

The boards of directors of Hooker Electrochemical Co., Niagara Falls, N. Y., and Shea Chemical Co., New York, last month approved a formal agreement for merger of the two companies subject to the approval of the stockholders of each concern. Shareholders of both firms will meet on May 28 to vote on the proposal.

Under the terms of the proposed consolidation, Hooker will be the continuing company and its name will be changed to Hooker Chemical Corp. The merger will be effected by the issuance of 800,576 shares of Hooker common in exchange for all of the presently outstanding 1,401,010 shares of class A and class C common stock of Shea. Also 41,200 shares of Hooker common will be exchanged for 6,000 shares of Shea's \$7.00 cumulative preferred stock.

Shea produces sodium triphosphate, dicalcium phosphate, phosphoric acid, tetra sodium pyrophosphate, ferrophosphorus and a number of other phosphorus compounds. It has four plants located at Columbia, Tenn.; Jeffersonville, Ind.; and Adams, Mass.

SAACI Golf Outing

The Salesmen's Association of the American Chemical Industry, Inc. will hold its initial golf outing of the season at the Spring Brook Country Club, Morristown, N. J., May 20. Golfing will begin at 8:00 a.m. A buffet luncheon will be served between 11:30 and 2:30 p.m. and dinner will be at 7:00 p.m.

Rhodia Names Pierson

Appointment of Frank J. Pierson to the western division staff of its "Alamask" odor control divi-



Frank J. Pierson

sion was announced recently by Rhodia, Inc., New York. For the past 10 years, Mr. Pierson had represented Los Angeles Chemical Co., Los Angeles, as a sanitation specialist.

Badgley to Lehn & Fink

Reed M. Badgley has been appointed assistant new products manager for the Lehn & Fink Division of Lehn & Fink Products Corp., New York, it was announced recently by Emanuel Goren, division manager. Mr. Badgley will be concerned with development and coordination of new product promotions. He previously was associated with Vick Chemical Co., New York, where he was an advertising assistant. The division produces "Lysol" disinfectant.

Reed M. Badgley



CSMA Division Nominations

Nominating committees' selections of administrative committees of the six divisions of which the Chemical Specialties Manufacturers Assn. is composed were announced recently by H. W. Hamilton, secretary. The members of the administrative committees of the divisions are elected at the midyear meeting, to be held this year at the Netherland Hilton Hotel, Cincinnati, May 19-21. They take office following the annual meeting of C.S.M.A. in December.

The slates selected by the nominating committees of the divisions follow:

Aerosol Division, chairman, Charles E. Beach, John C. Stafford and Sons, Inc., Baltimore; committee members, A. R. Marks, Wheaton Plastics Co., Mays Landing, N. J.; Harvey C. Tull, Crown Cork & Seal Co., Philadelphia; H. R. Shepherd, Aerosol Techniques, Inc., Bridgeport, Conn., and R. W. Svendsen, Chase Products Co., Broadview, Ill.

Automotive Division, chairman, Joseph Ryan, Olin-Mathieson Chemical Corp., Baltimore; Bernard Berkeley, Foster D. Snell, Inc., New York; F. G. Church, National Carbon Co., division of Union Carbide Corp., New York; N. F. Gurley, Simoniz Co., Chicago; Donald H. Hanson, R. M. Hollingshead Corp., Camden, N. J.

Disinfectant and Sanitizers Division: chairman, R. F. Prindle, Lehn & Fink Products Corp., Bloomfield, N. J.; A. Petrocci, Onyx Oil & Chemical Co., Jersey City, N. J.; Rebecca Shapiro, Hudson Laboratories, Inc., New York.

Insecticide Division, chairman, Carlos Kampmeier, Rohm & Haas Co., Philadelphia; A. C. Miller, Gulf Oil Corp., Pittsburgh; H. W. Moburg, Rex Research Corp., Toledo, O.

Soap, Detergents and Sanitary Products Division, chairman, Melvin Fuld, Fuld Brothers, Inc., Baltimore; C. E. Stevens, General Aniline & Film Corp., and D. H. Terry, Boyle-Midway division of American Home Products Corp., Cranford, N. J.

Waxes and Floor Finishes Division, chairman, H. J. Mellan, Durez Plastics Division, Hooker Electrochemical Co., North Tonawanda, N. Y.; A. H. Bohnert, Federal Varnish Division, Chicago, and A. E. Budner, S. C. Johnson & Son, Inc., Racine, Wis.

Honor Top Lever Salesman

Thomas J. Oliphant of the Birmingham district office of the Pepsodent division of Lever Brothers Co., New York, has been selected as the firm's outstanding salesman for the past year, it was



Clem S. Brooks (right) newly appointed sales manager, White King Industrial Division of the Los Angeles Soap Co., looks over territory maps with his new administrative assistant, Robert H. Head. Prior to his new appointment last month, Mr. Brooks was assistant to Robert S. Hull who headed the industrial division of the company until his death in November 1957. Mr. Brooks' experience with White King dates back to 1954 when he joined the firm as a salesman calling on laundries, dry cleaners, hotels, motels, restaurants and all types of industrial firms. From this job he advanced to district manager in the San Francisco office. Before coming to White King, Mr. Brooks' experience included laundry supply salesman, laundry manager, laundry routeman. He also served for four and one-half years in the U. S. Army and Navy. Mr. Brooks' new assistant, Robert Head, was transferred from the company's consumer products division where he had been in charge of sales training for the past year. Mr. Head was an outstanding salesman of White King consumer products from 1952 until his advancement to sales trainer.

announced last month. In recognition of this honor, Mr. Oliphant received the Distinguished Salesman Award of the Sales Executives Club of New York at a recent banquet held in the Waldorf-Astoria Hotel. Top salesmen from 50 leading corporations were also honored at the banquet. The award to Mr. Oliphant was presented by James A. Farley, former Postmaster-General of the United States.

USI Names La Marche

Paul J. La Marche has been appointed director of production for U. S. Industrial Chemicals Co., New York, a division of National Distillers and Chemical Corp., it was announced recently by Robert H. Cornwell, vice-president. Mr. La Marche joined National Distillers in 1949. Shortly thereafter, he became manager of sodium sales. Since 1951 he had been manager of the company's Ashtabula, O., plants. Before joining National Distillers, he was associated with the electrochemicals department of E. I. du Pont de Nemours & Co., Wilmington, Del.

Rohm & Haas Price Cut

A reduction of five cents per pound in the tank car and tank truck price of nonylphenol, an intermediate used in the production of nonionic detergents, was announced last month by Rohm & Haas Co., Philadelphia. Drum and less-than-drum prices have been reduced 4½ cents per pound. The new prices are: tank car and tank truck, 19½ cents per pound; carload and truckload (400-pound drums) 22 cents; less than truckload drums, 23 cents; and less than drum quantities, 33 cents.

New Glamur Director

David Unterberg has been elected a director of Glamur Products, Inc., Syracuse, N. Y., it was announced recently by Jack Hosid, president. Glamur manufactures a liquid rug and upholstery cleaner called "Easy Glamur." Mr. Unterberg is general counsel to the company through his law firm, Unterberg & Unterberg. He formerly was senior enforcement attorney of the New York regional office of the Securities Exchange Commission.

Cosmetics

THE UNSEEN INGREDIENTS IN
PRODUCTS SEEN EVERYWHERE

SONNEBORN
WHITE OILS
and
PETROLATUMS

For more than half a century Sonneborn has helped manufacturers maintain the confidence of their customers by its own constant research activities and by its development work with manufacturers in the production of better finished products through the more effective use of white oils and petrolatums. This dual effort has resulted in ever better products for both Sonneborn and its customers.

Sonneborn

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Morgens Guest Speaker

Howard J. Morgens, president of Procter & Gamble Co., Cincinnati, will be main speaker



Howard J. Morgens

at the 97th annual commencement exercises of Washington University, St. Louis, on June 11. Mr. Morgens, who became head of P&G last September, succeeding Neil H. McElroy, who was named Secretary of Defense, was graduated from Washington U. with a B.A. degree in 1931. Shortly after attending Harvard Graduate School of Business Administration, he joined Procter & Gamble. He became a vice-president in 1948, a director in 1950, and executive vice-president for the firm's United States operations in 1954.

Warfarin Toxicity Data

A new folder containing toxicity data on warfarin insecticides was issued last month by the Wisconsin Alumni Research Foundation, Madison, Wis. Included in the literature is information on the different types of warfarin rodenticides, the physiological action of warfarin poisoning, and treatment of warfarin rodenticide ingestion.

The brochure was prepared as part of an educational campaign conducted by the Wisconsin foundation to aid poison control centers throughout the nation. There are presently 142 in operation, or in the process of opening. Their main function is that of clearing houses for information on the toxic ingre-

dients of many specialty products, including insecticides, rodenticides, floor waxes, shoe polishes and deodorants.

New Givaudan Perfumes

A new line of perfume compositions for use in detergents, waxes, polishes, adhesives and starches, was introduced recently by Sindar Corp., New York. Trade-named "Odrene," the new series includes all popular fragrance types and is claimed to be adaptable to most individual processing requirements.

Shampoo Promotion

Helene Curtis Products, Inc., Chicago, will spend one million dollars during the next three months in a special promotion campaign on behalf of its "Enden" shampoo. The campaign will feature the heaviest newspaper advertising in the product's two-year history, national magazine layouts, and spot television commercials, in addition to the sponsorship of three network TV shows, "What's My Line," "Oh Susanna," and "Dick and the Duchess." Special "Enden" point-of-sales display units will be available to retailers.

Johnson Names Buckman

Appointment of Alfred F. Buckman to the newly-created post of director of research and develop-



A. F. Buckman

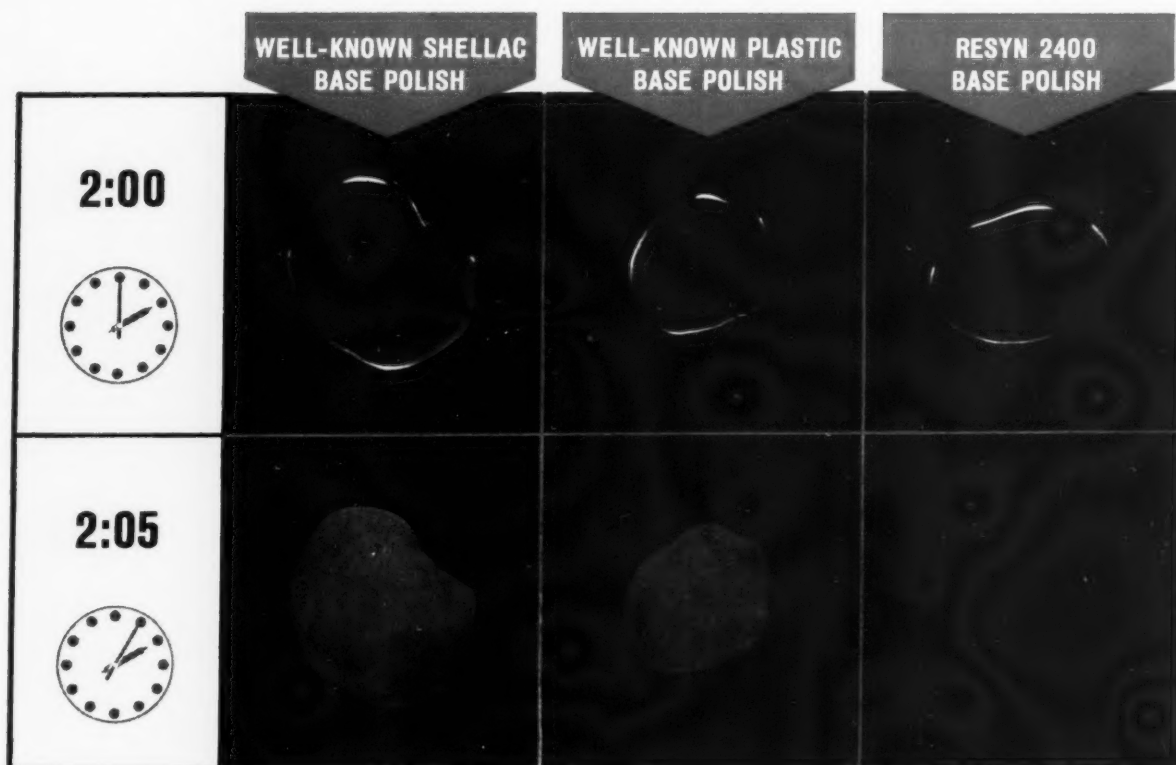
ment for S. C. Johnson & Son, Inc., Racine, Wis., was announced recently by J. V. Steinle, vice-president of the research and development division. Mr. Buckman formerly was assistant director of the division, a post he assumed in November, 1956.

Mr. Buckman joined Johnson in 1946 as development supervisor in the research and development division and later served as head of the quality control depart-

Jack W. Sugden (left), vice-president and director of marketing of B. T. Babbitt, Inc., New York, is shown addressing recent sales meeting at which the most extensive advertising and sales campaign in the company's history were announced. With Mr. Sugden are Michael P. Frawley (center), executive vice-president, and Jack Schenberg, vice-president and sales manager of Babbitt's Bostwick Division, Bridgeport, Conn. More than 80 company salesmen from the New York, Chicago, Philadelphia, Boston, Washington and Baltimore districts attended the meeting.



Comparison Test of Floor Polishes proves



GREATER SPOT RESISTANCE of new vinyl base

A simple comparison. Take three tiles. Coat each with a different floor polish, using shellac, ordinary plastic and NEW VINYL RESYN® 2400 base polishes. Allow polishes to dry thoroughly. Apply a drop of water to each tile. Wait 5 minutes. Remove excess water.

The result?

No water spotting is visible on the tile coated with RESYN 2400 base polish. As you can see above. Compare this with the white water spots that remain on the tiles coated with well-known brands of polish.

Now try removing the polishes from the same test tiles with household ammonia, ordinary soap or detergent solutions. See for yourself how water resistant RESYN 2400 washes off the tiles more easily and completely!

Exceptional spot resistance combined with exceptional ease of removal shows how unusual RESYN 2400 is. With no sacrifice of gloss and permanent non-yellowing. Interested? Write today for complete information on trade-sales and rebuffable industrial maintenance polishes formulated with RESYN 2400.

RESIN DIVISION

National

STARCH PRODUCTS INC.

750 Third Avenue, New York 17 • 3641 So. Washtenaw Avenue, Chicago 32 • 735 Battery Street, San Francisco 11

ment and as production manager of the production division. He previously had been associated with R. M. Hollingshead Corp., Camden, N. J.

Cowles Appoints Wagner

Cowles Chemical Co., Cleveland, has appointed Wagner Bros., Inc., Detroit, as distributor for the complete line of its metal finishing chemicals, it was announced recently by C. C. Clabaugh, manager of Cowles metal finishing chemicals department. Mr. Clabaugh said that stocks of Cowles products will be carried by Wagner at their various points and that Cowles sales and technical service personnel will work closely with the local representatives of Wagner. He also stated that these products will continue to be sold by present Cowles distributors as well as directly from the company's warehouse stock points.

Ultrasonic Dishwasher

A noiseless ultrasonic dishwasher will be commercially available, probably within the year, according to Acoustica Associates, Inc., Mineola, N. Y., and Culver City, Calif. The new machine will clean unscrapped dishes, pots, and pans in a fraction of the time now required by conventional dishwashing equipment, said Robert L. Rod, Acoustica president, when announcing the new development. Initial cost of the machine will be about

Model 310 push button paste dispenser of Dema Engineering Co., St. Louis, left, handles waterless hand cleaners, mechanics' hand soaps, etc. Model 320 dispenses products in a wide range of viscosities from liquids to heavy pastes.



MAY, 1958



William Hoffman (right), sales representative of Noxon, Inc., Jersey City, N. J., metal polish manufacturer, presents the first Noxon "handy kleening-kit" to Carl Burns of the Odeon Theatre in New York. Noxon plans to present many kits to theatre and office personnel in promotion of Noxon's newly designed 14-ounce can.

\$500. Plans call for units for home, restaurant and other commercial uses.

Another recent development at Acoustica is a 150 gallon capacity ultrasonic cleaning system, said to be the largest such unit yet to be offered as standard equipment. Either solvent or aqueous detergent solutions can be used in this system.

New "Dial" Soap Contest

A new "Win An Oil Well" "Dial" soap jingle contest was begun on Mar. 29 by Armour and Co., Chicago. The contest, which will run through May 3, offers a grand prize of the full operating

income from a producing oil well or \$25,000 in cash. The grand prize winner will be named from one of the six weekly \$1,000 winners. In addition, each week five prizes of \$100 and 200 prizes of \$10 will be offered. Contestants must write a two line jingle beginning with "Dial is wonderful . . ." The contest is being supported by full page four color advertisements in *Life* and *Look* magazines and in *This Week* and *Parade* Sunday newspaper supplements. Armour will also offer colorful point-of-sales display units to dealers throughout the nation.

New Dema Dispensers

Dema Engineering Co., 702 East Big Ben Blvd., St. Louis 22, recently introduced two new push button paste dispensers. "Model 310" is designed to dispense waterless hand cleaners, mechanics' hand soaps, protective creams, and other paste or emulsion-type products from factory-filled disposable containers.

The second type, designated "Model 320," has a reservoir capacity of three quarts and dispenses materials covering a wide range of viscosities—from liquids to heavy pastes. This unit has a visual indicator that shows the quantity of material in the reservoir.

219

PACING THE FLOOR WON'T LIGHTEN YOUR BURDENS!



BUT here is something that can! Turn over to *FRITZSCHE* those matters that pertain to your product's fragrance. This will put your perfume problems right where they belong—in the hands of odor specialists—not just one, but a whole staff of experts, each a master of some phase of creative perfuming. They will bring to the focal point of your problem the necessary skill and experience. This complete service is yours without obligation or cost. Should we arrive at a solution *satisfactory to you*, you will have the further assurance that every order delivered for your account will be of guaranteed uniformity in absolute accord with the formulations developed for your product. Why not put fragrance worries completely out of your mind? . . . Let FRITZSCHE do the worrying for you!

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Established 1871



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ODORANTS and DEODORANTS
for INDUSTRIAL and
TECHNICAL USE



MADE-TO-ORDER FRAGRANCES
for PERFUMES, TOILETRIES
and COSMETICS



SUPPLIERS of
ESSENTIAL OILS,
AROMATIC CHEMICALS,
BASIC PERFUME and
FLAVOR RAW MATERIALS

Davidson Heads New Purex Division

Craig Davidson has been named to head the newly formed product planning division of Purex

has been named director of marketing research and product plans, and Dr. Walter Lorenz, who will serve



John B. McLaughlin

Corp., South Gate, Calif., it was announced late last month by Alan C. Stoneman, president. The division will handle development of all new Purex products.

Mr. Stoneman also reported the reorganization of the firm's marketing division to include the former sales and advertising departments. This new division will operate under the direction of John B. McLaughlin, who assumes the title of vice-president of marketing. He formerly was sales vice-president.

An executive at Purex for the past nine years, Mr. Davidson's new title is vice-president of product planning. He formerly was marketing vice-president. He will be assisted by Jack W. Northrup, who



Jack W. Northrup

as technical director of the division. Mr. Northrup previously was director of marketing research and public relations. Before that, he was a brand advertising manager. He has been with the firm since 1950. Other appointments in the new division include: L. K. Warden, assistant director; James Williams, assistant director of marketing research; Gunther Klaus, manager of sales forecasting; Martin Mann, manager of consumer research and testing; and Robert Tewalt, sales and market analyst.

Mr. McLaughlin, who will head the new marketing division, came to Purex last year from Kraft Foods Co., Chicago, where he had been director of sales and advertising. He will be assisted by C. C.

C. C. Overstreet



Leslie C. Bruce, Jr.



Overstreet, recently appointed national sales manager, and Leslie C. Bruce, Jr., director of advertising. Mr. Overstreet previously had served as director of domestic sales and as southwest division manager. He joined Purex in 1953. Mr. Bruce joined the company in 1954 as a brand advertising manager and was named to his present position last May.

A third major change announced by the company expands the research department to include process engineering and process development. Dr. R. C. Ferris, director of research will work under Earl Davis, vice-president of manufacturing. Jack Hofstetter continues as director of engineering and quality control.

— ★ —

New Soap Firm

Minute Soap Co., Farmingdale, N. Y., has been granted a charter of incorporation to manufacture soaps. Capital stock is listed at 200 shares, no par value. Directors of the new organization include Louis W. Chitow, North Bellmore, N. Y.; Norman E. Zahn, Bay Shore, N. Y.; and Julius Komins, West Islip, N. Y.

— ★ —

"Dash" Bows in Canada

"Dash" low sudsing laundry detergent, first introduced by Procter & Gamble Co., Cincinnati, in the United States about two years ago, recently made its debut in Canada. The New York advertising agency of Dancer-Fitzgerald-Sample, has been selected to handle the advertising program for the product. A national advertising campaign will be used to help acquaint Canadian consumers with "Dash."

— ★ —

New Beach Distributor

Beach Soap Co., Lawrence, Mass., recently appointed Apothecaries Hall, Waterbury, Conn., as sales representative in the Connecticut area. Apothecaries Hall will handle the complete line of Beach commercial and institutional laundry products, including "Prime SOHP," "Phosrite," and "Hycon."

VERSATILE POLYMER

PVP

(polyvinylpyrrolidone)

PVP is a synthetic, high-molecular-weight polymer with a remarkable variety of properties.

It is a binder, stabilizer, detoxifier, disperser, and film former, and is physiologically acceptable.

HERE ARE SOME OF THE AREAS IN WHICH PVP IS IMPROVING PRODUCTS AND PROCESSES

Detergents: Prevents soil redeposition, controls color bleeding, and reduces irritation.

Lithography: Colloid for diazo and dichromate sensitizers. Excellent post-etch. In fountain solution, helps keep cloth rollers clean.

Paints: Improves pigment dispersion and film leveling. Makes possible use of dyes to obtain new colors and shades.

Waxes and Polishes: Improves luster, cleansing action, flow, and wetting.

Cosmetics: In hair preparations, PVP improves hair management. Acts as a detoxifier. Stabilizes lathers in shaving preparations and emulsions in skin cleansing products.

Pharmaceuticals: Minimizes toxic side effects of many drugs. Prolongs drug action and increases effective blood level. Acts as suspending agent in liquids and binder in tablets.

Beverages: Removes chill haze and acts as a clarifying agent by complexing with and precipitating tannins in beer, wines and fruit juices.

Adhesives: Gives stable dispersions of vinyl adhesives and superior adhesion.

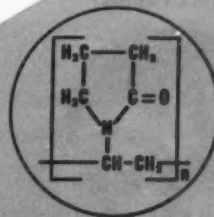
Paper: Produces better pigment dispersions, smoother coatings. Improves wet strength and ink receptivity.

Inks: Better gloss and pigment dispersion. Increases solubility of dye-stuffs and prevents gelation. Can improve ball-point inks, type-writer ribbons and carbon papers.

Textiles: Prevents flocculation of titanium dioxide in delustering of synthetic fibers. Adaptable as warp size for acetate and viscose. Improves other sizes. Improves dye receptivity of hydrophobic fibers. Dye scavenger in print washes.

Glass: Gives outstanding adhesion to glass surfaces. Acts as a glass fiber forming size for increased strand strength.

There is a lot more to know about PVP. Write for complete information on this versatile chemical.



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GENERAL ANILINE & FILM CORPORATION
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Food Machy. Reorganizes

Food Machinery and Chemical Corp., New York, has established two new operating chemical



Alfred T. Loeffler

departments and enlarged its executive committee, it was announced late in April by Carl F. Prutton, executive vice-president.

The new operating units are the organic chemicals department and the inorganic chemicals department. The first will include Niagara Chemical Division and the chemicals and plastics division, formerly the organic chemicals division. The inorganic chemicals department comprises Becco Chemical, Westvaco Chlor-Alkali and Westvaco Mineral Products divisions.

Alfred T. Loeffler, FMC vice-president, is general manager of the new organic chemicals department. He is assisted by R. H. F. Dade, now vice-president of the

Frederick A. Gilbert



chemical divisions. General manager of the new inorganic chemicals department is Frederick A. Gilbert, previously manager of Becco Chemical and Westvaco Chlor-Alkali divisions. Donald C. Oskin, assistant general manager under Mr. Gilbert, has been named a vice-president of the chemical divisions.

New division managers include: Westvaco Chlor-Alkali, Robert J. DeLargey, formerly assistant division manager; Westvaco Mineral Products, Raymond F. Moran, formerly manager of the division's Newark, Calif., plant; Becco Chemical Division, Dewey H. Nelson, formerly assistant manager and sales manager; Niagara Chemical Division, Stuart Bear, formerly agricultural manager.

The chemical division's executive committee has been enlarged by the appointments of Jackson V. Vernon, William N. Williams, and J. D. Fennebresque, all FMC vice-presidents. They will serve on the committee which also includes Dr. Prutton, Mr. Loeffler, Bernard H. Jacobson, and Mr. Gilbert.

— ★ —

New Emulsol Degreaser

A new oil-in-water emulsifier for use in the manufacture of degreasers was developed recently by Emulsol Chemical Corp., Chicago, a division of Witco Chemical Co., New York. "Emcol P-5900" is said to have excellent tolerance to variations in aliphatic hydrocarbon solvents. Finished emulsion degreasing formulations based on "Emcol P-5900," have good rinsing characteristics and leave metal surfaces free of film, according to the manufacturer.

— ★ —

Record Pennsalt Sales

Pennsalt Chemicals Corp., Philadelphia, recently reported the highest yearly sales volume in its 108-year history, during 1957. Net sales totaled \$79,786,897, compared with \$72,416,526 in 1956. Net income amounted to \$3,067,482, equal to share earnings of \$2.40. This compared with \$3,626,333 and \$2.92 in 1956.

Tenney Joins Jefferson

Howard A. Tenney joined Jefferson Chemical Co., Houston, Tex., on Mar. 15 as manager of



Howard A. Tenney

antifreeze sales, it was announced by D. L. Griswold, general manager of marketing. Mr. Tenney will supervise sales of antifreeze glycol and will work directly under Mr. Griswold. Previously, Mr. Tenney was assistant sales manager for the Texas City, Tex., office of Monsanto Chemical Co., St. Louis.

— ★ —

Sinclair Names Olsen

Van J. Olsen has been appointed midwest sales representative for Sinclair Chemicals, Inc., New York, a wholly-owned subsidiary of Sinclair Oil Corp. Mr. Olsen previously was associated with Sinclair Refining Co. as an industrial salesman in Michigan and national accounts representative for the Great Lakes division.

Van J. Olsen



PILOT BUILDS BETTER PRODUCTS ABS-99

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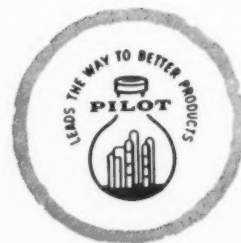
PILOT ABS-99 builds better end products because ABS-99 is a better product to start with. ABS-99 is the highest dodecyl benzene sulfonic concentrate commercially available: 98% concentrated with extra activity—14% more active ingredient than ordinary 88% pure sulfonics.

ABS-99 is purer. So pure, in fact, that it may be kept in plain steel containers!

Pilot ABS-99 offers greater compatibility with oils and other organic substances; it prevents precipitation because of its low sulfate content, lowest of any similar material on the market.

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SOAP and CHEMICAL SPECIALTIES

New Cos. Chemists Chapter

The founding dinner meeting of the Los Angeles chapter of the Society of Cosmetic Chemists was held March 18, at the Roger Young Auditorium, Los Angeles. Dr. Paul Jewel of Max Factor & Co., Hollywood, was elected chairman pro-tem., and Miss Betsy Bevins, also Max Factor, secretary pro-tem. Harry Mace, Kaval-Thermol Co., Burbank; Karl Westerberg, Los Angeles consulting chemist, and David Lozano, Rexall Drug Co., Los Angeles, were elected to act as the nominating committee.

Also present for the meeting were Robert A. Kramer of Evans Research and Development Corp., New York, secretary of the Society of Cosmetic Chemists and George Kolar, Kolar Laboratories, Chicago, a former president of the Society.

The inaugural meeting of the Los Angeles Chapter was held April 24, when officers and directors were elected.

Maison deNavarre, first president and founder of the Society of Cosmetic Chemists, presented the first technical paper to be given before the chapter at the April 24 meeting. He spoke on "The Deteriorating Effect of Non-Ionics on Preservatives."

In addition to chapters in New York, Los Angeles and Chicago, there are affiliated, but independent societies in England, Denmark, Germany and Switzerland.



At the head table at the founding dinner meeting of the Los Angeles Chapter of the Society of Cosmetic Chemists, left to right, Robert A. Kramer, Evans Research and Development Corp., New York, secretary of the Society; Dr. Paul Jewel, Max Factor & Co., Hollywood, chairman pro-tem.; Miss Betsy Bivens, Max Factor, secretary pro-tem., and George Kolar, Kolar Laboratories, Chicago, and a former president of SCC.

New Standard Plant

Standard Container, Inc., Montclair, N. J., has opened a new plant at Homerville, Ga., at the edge of the Okefenokee Swamp. Standard manufactures insecticide sprayers. The new unit initially will employ about 25 persons.

Cos. Chems. to Europe

A second European tour of the Society of Cosmetic Chemists has been announced for Sept. 5 to 24, it was announced recently by Robert A. Kramer, Evans Research and Development Corp., New York, secretary of the Society. This year countries to be visited include Italy,

Germany, Denmark and Holland. The purpose of the tour and meetings with cosmetic chemists in those countries is "to establish universal recognition for cosmetic chemistry as a science," Mr. Kramer said.

Shellac Groups Honor Lall

K. B. Lall, Secretary, Ministry of Commerce of India and director general of its foreign trade board, was guest of honor at a recent joint meeting of the United States Shellac Importers Association, Inc. and the American Bleached Shellac Manufacturers, Inc., held at the Downtown Athletic Club, New York.

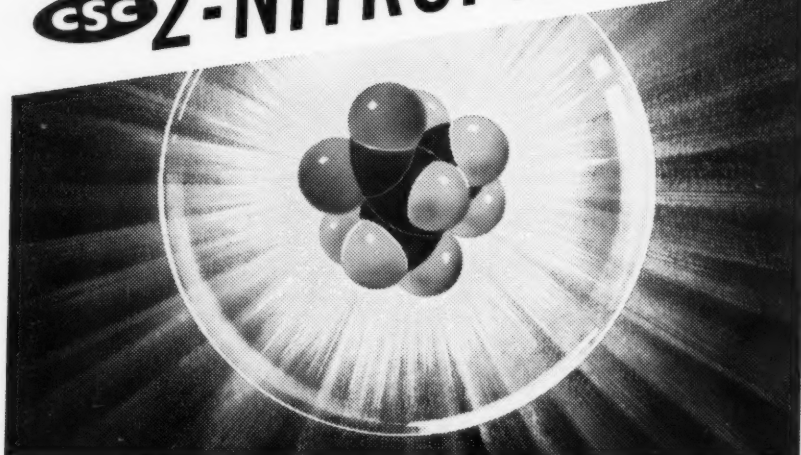
Mr. Lall said that India was working to increase her shellac exports in order to secure dollars by trade instead of through aid programs. He added that the Indian government had played a large role in preventing speculation in the shellac market a few years ago and that the stability the industry has achieved in India is demonstrated in the success of the closing by government order of the "Futka" or futures market in Calcutta. He also complimented the U.S. shellac manufacturers on their research programs and said that India was, in recent months, devoting more time and effort in this direction.

Founding dinner meeting of the Los Angeles Chapter of the Society of Cosmetic Chemists, held March 18, at Roger Young Auditorium, Los Angeles.



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Specific Gravity at 25/25°C	0.986-0.990
Pounds per U.S. Gal. at 68°F	8.24
Boiling Pt. at 760mm, °C	120.3
Flash Pt., °F (Tag Open Cup)	103.0
Solubility ml per 100 ml:	
Product in Water, 20°C	1.7
Water in Product, 20°C	0.6

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Butyl Lactate Butyl Stearate
Dibutyl Phthalate Ethyl Acetate
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Nitromethane 1-Nitropropane
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COMSULMEX, S.A., MEX.CO 7, D.F. • IN CANADA: McARTHUR CHEMICAL CO., MONTREAL, QUE.

Acquires "Air-Wick" Rights

Lever Brothers Co., New York, last month announced that it had acquired from Seeman Brothers, Inc., New York, trademarks and marketing rights in this country, its territories and possessions for the "Air-Wick" line of deodorizers for home use. The terms of the transaction were not disclosed. The product which comes in wick-type bottles and aerosol containers will be marketed by the Pepsodent Division of Lever through grocery, drug, hardware, variety and department stores.

Basic ingredients for "Air-Wick" will continue to be supplied by Airkem, Inc., New York. It will also continue to manufacture and distribute "Airkem," a commercial, industrial and institutional deodorant, as well as retain its foreign markets in 62 countries for both "Airkem" and "Air-Wick."



AOCS to Meet June 3

The northeast section of the American Oil Chemists' Society will hold its final dinner meeting of 1957-58 at Whythes Restaurant, New York, June 3. Guest speaker will be Arnold G. Wilbur of the product and development department of Celanese Corp., New York, who will discuss "Fat-Derived Plasticizers."



Fritzsche in Argentina

Formation of Fritzsche Brothers Argentina, S. A., was announced by John L. Casullo, president of Fritzsche Brothers, Inc., New York essential oil and aromatics house, at a press conference held in the R.C.A. Johnny Victor Theater, on March 27. The new company has offices, plant and manufacturing facilities in Buenos Aires. It started operations at the beginning of last month. South American branches of U. S. toiletries and other industries will now be able to purchase directly from Fritzsche Brothers Argentina perfume and flavor materials identical to those supplied to manufacturers in the U. S., Mr. Casullo pointed out.

Hogan Joins Perry Bros.

Ray Hogan, formerly with Roure-Dupont, Inc., and Rhodia, Inc., New York perfuming materi-



Ray Hogan

als firms, has joined Perry Bros., Inc., Woodside, N. Y., manufacturing perfume chemists, it was announced early this month. He will cover the states of New York, including New York City, New Jersey and Pennsylvania. Mr. Hogan is handling the entire Perry line of perfume bases, essential oils, aromatic chemicals and flavor bases.

★

Simoniz Names Bowler

Appointment of H. Bowler as comptroller of Simoniz Co., Chicago, was announced recently by Herbert W. Carr, executive vice-president. Mr. Bowler had been comptroller and operations manager for Simoniz Co., Ltd., Toronto. He will now headquarter in the firm's main office in Chicago.

★

AATCC Golf Outing June 6

The annual outing and golf tournament of the metropolitan section of the American Association of Textile Chemists and Colorists will be held at the North Jersey Country Club, Wayne Township, N. J., June 6. Luncheon will be served between 11:30 a.m. and 2:00 p.m. Dinner will be at 7:00 p.m. Reservations may be made by contacting Eugene J. Grady, Jacques Wolf & Co., 350 Lexington Ave., Passaic, N. J.



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CONVINCING EVIDENCE—A swarm of mosquitoes in this test glass enclosure show no interest in the man's arm above the black line where meta Delphene repellent has been applied, although they feast on his untreated wrist and hand. (USDA Photo)

INSISTENCE ON QUALITY RESULTS IN CONSUMER APPROVAL OF meta DELPHENE

Production of meta Delphene, Hercules Powder Company's diethyl toluamide, presented a challenging problem in the isolation of the product in the purity required of a cosmetic chemical. In solving this problem, Hercules drew on its long background in xylene oxidation to produce a material of uniformly high meta isomer content, free from color, odor, or irritating contaminants.

Consumer sales last summer of repellents based on meta Delphene reached the millions. Enthusiastic reports from both formulators and users proved

that meta Delphene offered amazingly long protection from insect pests, even under extreme conditions of wiping and perspiration. The public also welcomed the excellent cosmetic properties of the new material. Users were particularly pleased to find that meta Delphene was not oily, as they had long associated "oiliness" with older repellents.

Hercules' recent expansion of its plant facilities at Brunswick, Georgia, will assure you of an adequate supply of the same high quality meta Delphene for the 1958 season.

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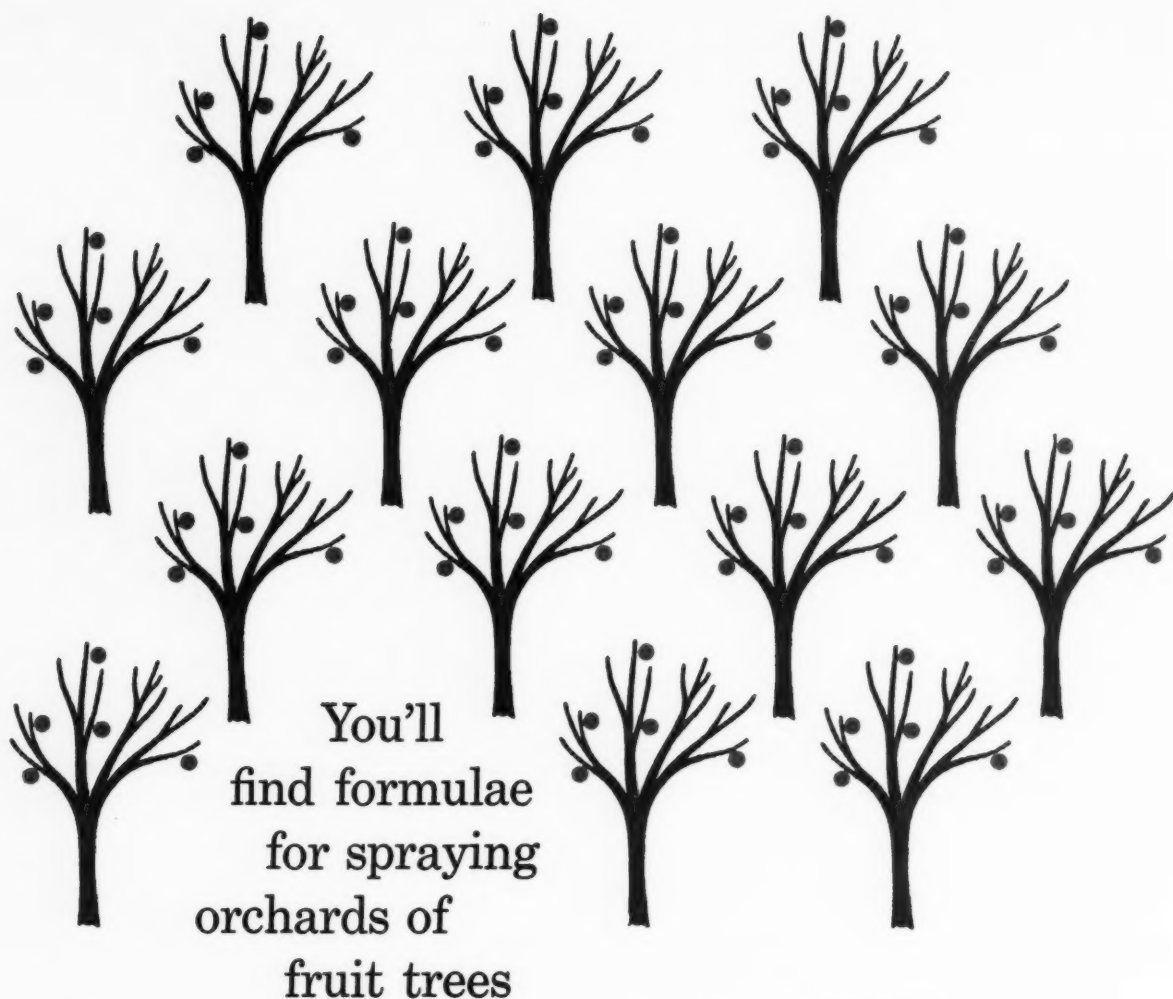
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Lever Names Bronson

Charles H. Bronson has been appointed sales manager of the industrial chemical products sales de-



Charles H. Bronson

partment of the industrial division of Lever Brothers Co., New York, it was announced recently by John L. Parry, general manager. Mr. Bronson joined the industrial division of Lever in 1956 and last year was transferred to his most recent post on the staff of the director of corporate development. He will be responsible for the sale of glycerine, fatty acids and continue to serve in an advisory capacity to the corporate development department.

Witco Appoints Myhre

Floyd B. T. Myhre has been named assistant to the president of Witco Chemical Co., New York, and head of the firm's Washington, D.C. office, it was announced recently. He will also serve as Washington

Floyd B. T. Myhre



representative for all Witco's divisions, including Ultra Chemical Works, Paterson, N. J. and Emulsol Chemical Corp., Chicago. Mr. Myhre, a retired Captain in the U.S. Navy, has served for the past three years as a manufacturers representative in the Washington area.

Two Shea Appointments

George C. Taylor has been named vice-president of finance and James D. Hogan, vice-president and controller of Shea Chemical Corp., Jeffersonville, Ind., it was announced recently. Mr. Taylor, who joined Shea in 1953 as an accountant, has served as comptroller for the past two years. Mr. Hogan who has been with the company since its formation in 1952, has served successively as office manager of the Columbia, Tenn., plant, plant manager of the Jefferson, Ind., unit, and vice-president and coordinator of customer relations at the company's New York office.

CSMA Brake Fluid Laws

The first revision of the "Compilation of Brake Fluid and Antifreeze Laws," was published recently by the Chemical Specialties Manufacturers Association, 50 East 41st St., New York 17. The revision contains all additional laws and regulations issued since the original publication and is complete through Jan. 1, 1958.

Each CSMA member will receive a free copy of the revision. Additional copies may be obtained for \$1.50 each for members, and \$2.00 each for non-members. The complete manual is available from CSMA for \$4.50 for members and \$6.00 to non-members.

Chemway Earnings Lower

Chemway Corp., Mountain View, N. J., recently announced a decline in its sales and earnings during 1957. Net sales totaled \$6,694,565, compared with \$7,351,204 in 1956. Net income amounted to \$117,624 and 11 cents. This compared with \$313,353 and 30 cents in 1956.

McCracken CIA Director

C. K. McCracken, vice-president and comptroller of Procter & Gamble Co., Cincinnati, recently



C. K. McCracken

was elected a national director of the Controllers Institute of America. He has been active with the institute since 1942 and in 1948-49 was president of its Cincinnati control.

Toni Names Bogaty

Herman Bogaty has been appointed assistant research director for Toni Co., Chicago, a division of Gillette Co., Boston, it was announced recently. In his new capacity, he will be responsible for the activities of the analytical chemistry section. He formerly was associated with Harris Research Laboratories, Washington, D. C., a Gillette subsidiary, where he was in charge of research projects for Toni.

Herman Bogaty



Purex, Wrisley Plan Merger

The boards of directors of Purex Corp., Ltd., South Gate, Calif., and Allen B. Wrisley Co., Chicago, last month announced that they had approved an agreement for merger of the two concerns. Terms of the transaction presently call for the exchange of one share of Purex stock for six shares of Wrisley stock. A hearing on the proposed exchange of stock will be held soon before the Cali-

fornia Corporations Commissioner. The companies will then submit the proposal to their respective stockholders for approval.

— ★ —

Gerberding to Visit U.S.

Horst Gerberding, co-owner of Dragoco, Inc., Holzminden, West Germany, has come to the United States for a six-weeks visit. He arrived here in mid-April. Mr. Gerberding is also head of the firm's perfume laboratories in Holzminden.



Horst Gerberding

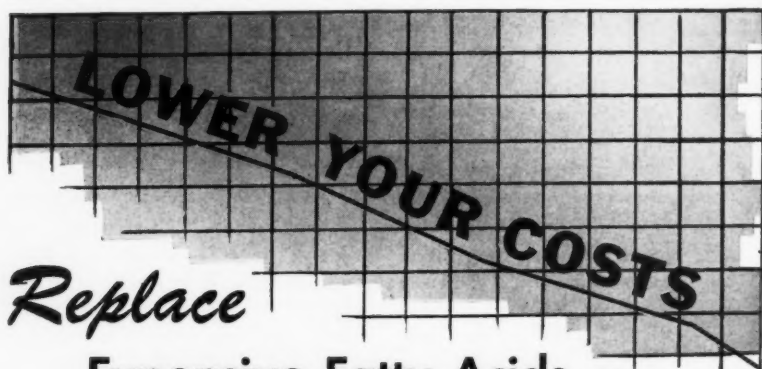
den. While in this country, he will make his headquarters at Dragoco's New York office.

— ★ —

Flooring Group to Snell

The Maple Flooring Manufacturers Association, Chicago, has appointed Foster D. Snell, Inc., New York consulting chemists, as its official testing laboratory. The MFMA tests and grants approval to finishes for maple, beech and birch flooring. Snell will immediately begin work on a revision of specifications for performance characteristics of heavy duty and gymnasium floors finishes. The specifications are expected to be available by Sept. 1.

A. A. Keller, recently elected secretary and treasurer of Hunnewell Soap Co., Cincinnati, (April SOAP AND CHEMICAL SPECIALTIES) previously had served with Jerks Socks Co., for 30 years in a similar capacity. He succeeds C. A. Young, who recently retired. Mr. Young had been secretary and treasurer since 1940.



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Election of William A. Bowen to the board of directors of Bowen Engineering, Inc., North Branch, N. J., was announced recently by Ralph T. Reeve, president. Mr. Bowen has served with the company since 1948 as a mechanical engineer. He is the son of William Spencer Bowen, who founded the firm in 1926. Dexter A. Smith and D. W. Belcher have been re-elected vice-presidents.

Puro Appoints Hanks

William G. Hanks has been named sales representative in Chicago for Puro Co., St. Louis, it was announced recently by W. Howard Zachritz, sales manager. Mr. Hanks, who for the past year has represented the firm in the State of Illinois, with the exception of Chicago, will continue in that capacity. He is headquartered at 6319 Kingsway Dr., Afton 23, Mo.

Mr. Zachritz also reported the appointment of The Jerome Kinoy Co., Yonkers, N. Y., as distributors for Puro in the metropolitan New York area, including northern New Jersey, Westchester,

William G. Hanks



Nassau and Suffolk counties. Address of the firm is P.O. Box 201, South Station, Yonkers, N. Y.

New Sugar Beet Agency

Church and Guisewite Advertising, Inc., Midland, Mich., has been appointed to handle the advertising of Sugar Beet Products Co., Saginaw, Mich., manufacturer of hand soaps. The firm's former agency was Crawford and McNelis, Detroit.

Kessler Appoints Pings

Wilbur B. Pings has been named general manager of Kessler Chemical Co., Philadelphia, it was announced recently. Kessler makes a complete line of surface active agents and plasticizers. Mr. Pings previously served for eight years with the experimental station of E. I. du Pont de Nemours & Co., Wilmington, Del. Prior to that, he was with Witco Chemical Co., New York.

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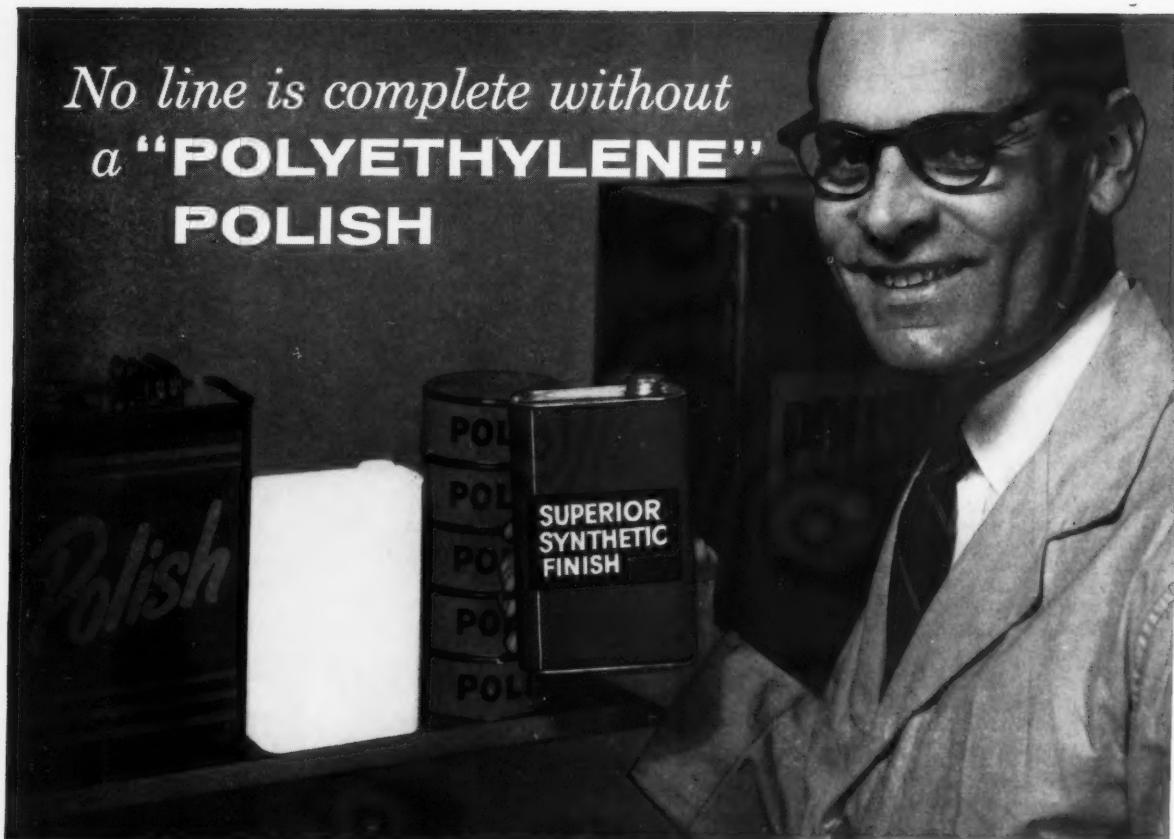
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Varn Succeeds Kingsbury

Charles E. Varn has succeeded Carl O. Kingsbury, who has retired, as New Orleans sales man-



Charles E. Varn

ager for Solvay Process Division of Allied Chemical Corp., New York, (formerly Allied Chemical & Dye Corp.) it was announced recently by Lester B. Gordon, Solvay vice-

president. Mr. Kingsbury had held the New Orleans post for 21 years. He went with Solvay in 1926 as a salesman with the St. Louis office.



Carl O. Kingsbury

He was transferred to the firm's Boston branch in 1929. Mr. Varn joined Solvay in 1947 as a chemist and three years later became a salesman at the Charlotte, N. C., office.

CIBS Golf Dates

The first of two golf outings to be held by Cosmetic Industry Buyers & Suppliers Assn. (CIBS) will be held at Rockland Country Club, Rockland, N. Y., June 10. CIBS will also hold a golf day at Baltusrol Golf Club, Springfield, N. J., Aug. 12. Arrangements for the June 10 outing may be made by contacting Robert L. Williams, program chairman, at Avon Products, Inc., 30 Rockefeller Plaza, New York 20.

TGA Scientific Program

A discussion of "Pressure Packaging with Nitrogen," by Morris J. Root, G. Barr & Co., Chicago, will be one of the highlights of the program slated for the June 5 meeting of the Scientific Section of the Toilet Goods Association. The meeting will be held in the Sert room of the Waldorf-Astoria Hotel, New York, with luncheon in the grand ballroom. The 1958 CIBS award will be presented at luncheon.

Eight papers will be read. S. L. Cooper of Procter & Gamble Co., Cincinnati, will speak on "Es-

tablishing the Safety of Fluoride Dentifrices." "Shelf and Accelerated Testing of Perfume Compounds in Finished Cosmetic Preparations" will be discussed by Victor Di Giacomo and Walter Wynne, Givaudan-Delawanna, Inc., New York. Dr. Samuel M. Peck and Dr. Irwin Kantor will present an evaluation of "Antiseptics versus Antibiotics for the Control of Skin Bacteria."

d'Aigremont Returns

Jacques d'Aigremont, president of Roure-Dupont, Inc., and Floramatic, Inc., both of New York, recently returned to the U. S. from South America. While there, he visited the company's principal customers and distributors.

Babbitt Sales Up

B. T. Babbitt, Inc., New York, recently reported an increase in sales during 1957. Net sales totaled \$21,874,031, as compared with \$19,499,028 in 1956. A net loss of \$1,117,977 was reported by the company for 1957. This compared with a net loss of \$520,612 in the preceding year.

Chemway Names McNamara

Appointment of Leo J. McNamara as administrative vice-president of the household products division of Chemway Corp., Mountain View, N. J., was announced recently by Vincent P. Brunelli, division president. Mr. McNamara previously was manager of the firm's Larvex Division. He has been with Chemway for five years. The household products division manufactures "Larvex" mothproofener, "Myna" glass cleaner and the "Carac" line of garden chemicals.

P&G Safety Record

Ten million man hours of operation without a lost-time accident was achieved last month by employees of the Ivorydale manufacturing, administrative and research buildings of Procter & Gamble Co., Cincinnati. This surpasses by more than five times the Ivorydale group's former record. The mark was achieved over a period of 43 months.

New Cowles Detergent

A new detergent designed especially for commercial laundering of linen was developed recently by Cowles Chemical Co., Cleveland, according to W. J. Schleicher, manager of the laundry chemicals department. Called "Super Desoil," the product is designed to remove stains caused by animal fats, vegetable oils and greases. Rinsing may be accomplished in hot or cold water, according to the manufacturer.





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<i>Automobile Aerosols</i>	<i>Herbicides</i>
<i>Anti-Static Sprays</i>	<i>Hormones</i>
<i>Fungicides</i>	<i>Ammonical Liniments</i>
<i>Growth Regulators</i>	<i>Polishing Waxes</i>
<i>Rust Preventatives</i>	<i>Antiseptics</i>
<i>Paint Touch Ups</i>	<i>Sunscreen Agents</i>
<i>Mold Release Agents</i>	<i>Lacquers</i>
<i>Paint Removers</i>	<i>Plastic Foams</i>
<i>Humidity Barriers</i>	<i>Insecticides</i>
<i>Christmas Snow</i>	<i>Charcoal Igniters</i>

In addition to traditional uses for the aerosol packaging method, constantly widening application is found in the vast "specialties" field. The pleasant fragrance, expected in an aerosol shampoo, shave cream, or room-spray, exerts an even greater sales appeal when found in a paint remover, Christmas snow, anti-static spray or growth regulator. The D&O Aerosol Testing Laboratories can provide your aerosol specialty with this sales-clinching asset... individually developed for you. Specific information on request.

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Perfume Bases
Flavor Bases
Dry Soluble Seasonings

Colgate Names Wells

Donald A. Wells has been named to the newly-created position of general products manager of the



Donald A. Wells

household products division of Colgate-Palmolive Co., New York, it was announced recently by William T. Miller, division vice-president. Mr. Wells will be responsible for supervision of all product managers in the development of marketing plans, advertising and merchandising for the division's products. He will report directly to J. P. Kauffman, director of marketing. Mr. Wells previously was vice-president of Leo Burnett Advertising agency, Chicago.

Mr. Miller also reported that Robert L. Angelus, also formerly with Burnett as an account executive, had joined Colgate as a product manager in the household products division. Mr. Angelus will be responsible for advertising and merchandising of "Vel" detergent powder, "Super Suds," and "Kan-Kil."

Acquires W. J. Bush Co.

The American branch of W. J. Bush & Co., British perfuming materials concern, was acquired by R. D. Webb and reincorporated under the name of R. D. Webb & Co., it was announced last month. At the same time it was announced that R. D. Webb has been elected president and treasurer of the company, which continues to make its headquarters in Cos Cob, Conn. Mr. Webb was formerly treasurer

of the American branch of W. J. Bush & Co.

H. S. Ogden, Jr., has been elected executive vice-president and A. Rolph Evans has been elected vice-president in charge of production of Webb.

No other changes in personnel were made. Webb's line of aromatic chemicals and essential oils will remain the same.

Schachte AC Director

Henry Schachte, vice-president of advertising for Lever Brothers Co., New York, has been named a director of the Advertising Council, New York. He will serve for a term of three years. Formed in 1912, the council aids through advertising national welfare projects such as Better Schools, Traffic Safety, Mental Health, Register & Vote, Religion in American Life, Red Cross, United Community Campaigns and U.S. Savings Bonds.

Sonneborn Appoints Lipkind

Henry Lipkind has been named chief chemist of the Belleville, N. J., plant of L. Sonneborn Sons, Inc., New York, it was announced recently by Rudolph G. Sonneborn, president. Mr. Lipkind will be in charge of technical and research activities of the company's Whistclean Division, which manufactures industrial detergents and cleaners. With Sonneborn since 1946, Mr. Lipkind previously had been director of product development for the firm's building products line.

Henry Lipkind



Bergin Rohm & Haas V.P.

Election of John F. Bergin as a vice-president of Rohm & Haas Co., Philadelphia, was announced



John F. Bergin

late last month. Mr. Bergin has been head of the company's patent department for many years. In 1948 he was elected assistant secretary. With the company since 1935, he is also assistant secretary of Southern Resin & Chemical Co., a wholly-owned subsidiary of Rohm & Haas.

Fritzche Honors Edwards

Carl W. Edwards, Chicago sales representative for Fritzche Brothers, Inc., New York, was presented with a Government bond in commemoration of his 35 years service with Fritzche at a company party held recently in Chicago. Mr. Edwards also received an embossed scroll as a memento of his initiation into the firm's quarter-of-a-century club. He is the club's 72nd member.

Bristol-Myers Names Two

Appointment of Edward Gelsthorpe as vice-president and general sales manager and F. Harry Fletcher as vice-president and national field sales manager of the products division of Bristol-Myers Co., Hillside, N. J., was announced recently. Mr. Gelsthorpe formerly was assistant vice-president and director of merchandising. Mr. Fletcher was assistant vice-president and assistant sales director.

CSMA Announces Committees for 1958

THE Chemical Specialties Manufacturers Association recently announced its committees to serve during 1958. Chairmen of CSMA's general committees include the following:

Executive, Donald M. King, Masury-Young Co., Boston; budget and finance, P. C. Reilly, Reilly Tar & Chemical Corp., Indianapolis; policy advisory, Gordon M. Baird, Baird & McGuire, Inc., Holbrook, Mass.; precautionary labeling, A. Haldane Gee, Foster D. Snell, Inc., New York;

membership, John R. Stoddard, Prentiss Drug & Chemical Co., New York; program and entertainment, George W. Fiero, Esso Standard Oil Co., New York; arrangements, H. W. Hamilton, CSMA, New York; greetings, W. C. Wallstein, West Chemical Products, Inc., Long Island City, N. Y.; publicity and public relations, Robert J. Hamilton, Antara Chemicals Division of General Aniline & Film Corp., New York; associate members, M. Lemmermeyer, Aromatic Products, Inc., New York; and publication advisory, Amos Badertscher, McCormick & Co., Baltimore.

The following have been

named chairmen of the aerosol division committees:

Administrative, W. Earl Graham, Clayton Corp., Westfield, N. J.; glass and plastic container advisory, Lawrence P. Hall, Jr., E. I. du Pont de Nemours & Co., Wilmington, Del.; aerosol commercial standards, R. W. Svendsen, Chase Products Co., Broadview, Ill.; precautionary labeling representative, W. E. Baulieu, Bridgeport Brass Co., Bridgeport, Conn.; aerosol publicity, Frederick G. Lodes, Lodes Aerosol Consultants, Inc., New York; general publicity and public relations representative, Frank R. Zumbro, Freon Products Division, E. I. du Pont de Nemours & Co.; liaison with colleges and universities interested in aerosol information in 1958, Francis Mina, Lodes Aerosol Consultants, Inc.; liaison on food aerosols, Robert Webster, Ohio Chemical & Surgical Equipment Co., Madison, Wis.; product survey, Frederick G. Lodes, Lodes Aerosol Consultants, Inc.; program, W. E. Baulieu, Bridgeport Brass Co.; membership, H. C. Tull, Crown Cork & Seal Co., Philadelphia; publication advisory, Ralph C. Downing, Freon Products Division, du Pont; post office policy, Charles E. Beach, John C. Stallfort & Sons, Inc., Baltimore; scientific, J. J. Buchanan, Continental Can Co., Chicago. Sub-committees: definitions and terms as applied to aerosols, Ralph C. Downing, Freon Products Division, du Pont; method of clinch measurement and effects on sealing efficiency, H. R. Umstead, Clayton Corp., St. Louis; safety, F. A. Mina, Lodes Aerosol Consultants, Inc.; insecticide standard methods, Montfort A. Johnsen, Peterson Filling & Packaging Co., Danville, Ill.; protective coatings standard methods, D. S. Tillotson, Pennsalt Chemicals Corp., Philadelphia; methods for determining particle size, Frank A. Bower, E. I. du Pont de Nemours & Co., Wilmington, Del.; personal products standard methods, Morris J. Root, G. Barr & Co., Chicago; special committee on pressure determination, Pete Clapp, Western Filling Corp., Los Angeles; public relations, W. E. Baulieu, Bridgeport Brass Co.; safe-fill, J. J. Buchanan, Continental Can Co., Chicago; and unofficial rules and regulations for aerosols, R. V. Sharpless, Gulf Research & Development Co., Pittsburgh.

Committees of the CSMA automotive division are headed by the following chairmen:

Administrative, A. James Coulter, Gulf Oil Corp., Pittsburgh; brake fluid, Harold G. Lederer, R. M. Hollingshead Corp., Camden, N. J.; scientific, W. A. Hall, E. I. du Pont de Nemours & Co., Marshall Laboratory, Philadelphia; program, Myron Frank, Dow Chemical Co., Midland, Mich.; committee to study state laws and regulations governing the use and sales of antifreezes, Norman L. Amend, Wyandotte Chemicals Corp., Wyandotte, Mich.; products, C. E. Alderdice, Jr., The Bell Co., Chicago; legislative representative, W. A. Hall, du Pont; publications advisory, Bernard Berkeley, Foster D. Snell, Inc.; special committee



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to study hazardous substances labeling laws, C. M. White, Olin Mathieson Chemical Corp., Rochester, N. Y.; development of official test brake fluid, Donald H. Hanson, R. M. Hollingshead Corp.; and SAE liaison, Harold G. Lederer, R. M. Hollingshead Corp.

In the disinfectants and sanitizers division the following committee chairmen were elected:

Irving Gaines, Onyx Oil & Chemical Co., Jersey City, N. J.; membership, Perry G. Bartlett, West Chemical Products, Inc.; program, F. R. Geib, Dow Chemical Co.; publications advisory, A. Haldane Gee, Foster D. Snell, Inc., scientific, A. S. duBois, West Chemical Products, Inc.; interim committee on iodophors, G. E. Stevens, General Aniline & Film Corp. Sub-committees: peptones, A. S. duBois, West Chemical Products, Inc.; and quaternaries, R. C. Sherwood, Sterwin Chemicals, Inc., New York.

Committees in the insecticide division are headed by the following chairmen:

Administrative, John A. Rodda, Fairfield Chemical Division, Food Machinery and Chemical Corp., New York; legislative representative, Geo. W. Fiero, Esso Standard Oil Co.; membership and product survey, Joseph Lee, McLaughlin, Gormley King Co., Minneapolis; program, Alfred Weed, Olin Mathieson Chemical Corp., Asheville, N. C.; publications advisory, Amos Badertscher, McCormick & Co., Baltimore; scientific, H. L. Haynes, Carbide & Carbon Chemicals Co., Yonkers, N. Y.; advisory members, S. C. Billings, U. S. Department of Agriculture; and insecticide chemical analysis, Mark L. Hill, Gulf Oil Corp., Philadelphia.

Soaps, detergents and sanitary chemical products division elected the following committee chairmen:

Administrative, Clarence L. Weirich, C. B. Dolge Co., Westport, Conn.; commercial standards, C. E. Stevens, General Aniline & Film Corp., New York; A. G. Peck, Peck's Products Co., St. Louis; toxicity, Irving Levenstein, Leberco Laboratories, Roselle Park, N. J.; membership, L. D. Berger, Jr., Union Carbide Chemicals Co., New York; program, Walter C. Fox, Solvay Process Division, Allied Chemical Corp., New York; specifications review, D. H. Terry, Boyle-Midway Division, American Home Products Corp., Cranford, N. J.; general publicity and public relations representative, William T. Scott, Atlas Powder Co., Wilmington, Del.; publications advisory representative, D. H. Terry, Boyle-Midway Division, American Home Products Corp.; scientific, J. C. Harris, Monsanto Chemical Co.

The following chairmen were elected for the waxes and floor finishes division:

Administrative, C. S. Kimball, Foster D. Snell, Inc.; commercial standards, Daniel Schoenholz, Foster D. Snell, Inc.;

legislative representative, Earl Brenn, Huntington Laboratories, Inc., Huntington, Ind.; membership, Frank J. Pollnow, Jr., Vestal, Inc., St. Louis; program, Earl Brenn, Huntington Laboratories, Inc.; publications advisory, Daniel Schoenholz, Foster D. Snell, Inc.; scientific, Donald E. Whyte, S. C. Johnson & Son, Inc., Racine, Wis.

— ★ —

Welch Awards Luncheon

The annual Charles S. Welch awards, sponsored by the Toilet Goods Association, will be presented at a luncheon May 22 at the Wal-

dorf Astoria Hotel, New York. The event will take place in Starlight Roof at 12:30 p.m. In previous years the awards were presented at the annual convention of TGA.

Originally conceived as packaging awards, they are now given to the winners in an essay contest. This year's contestants are students at the Graduate School of Business of New York University writing on subjects pertaining to the toilet goods field.

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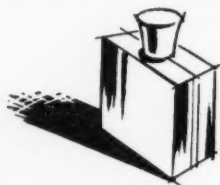
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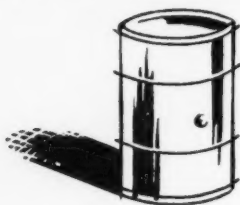
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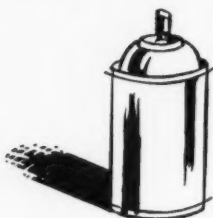
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sively from 100% Pennsylvania Crude. All
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2251 Oil—a 100% solvatile,
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combines beauty with
skid resistance...**

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COLLOIDAL SILICA

When you formulate your quality floor waxes with Du Pont "Ludox" colloidal silica, you have two powerful sales advantages:

First, you can sell *skid resistance*. Tiny, transparent spheres of "Ludox" exert a snubbing action with every footstep . . . give sure-footed traction. That's especially important where traffic is fast and heavy.

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associate with quality wax. Floors are easy to keep beautiful, because scratches and scuffs can be buffed out readily.

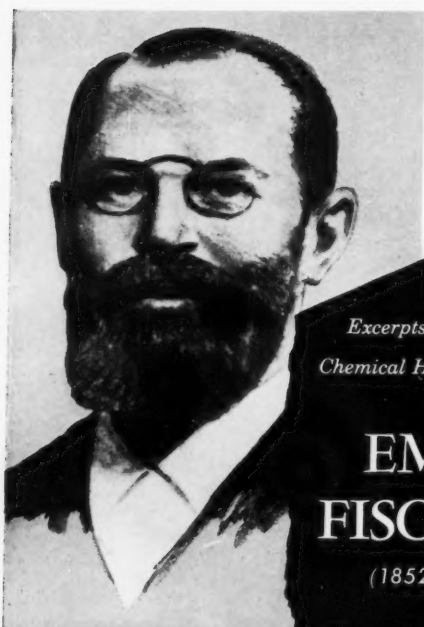
It adds up to a powerful sales story—*your* story when you formulate or distribute waxes containing "Ludox"—Du Pont's anti-slip ingredient. E. I. du Pont de Nemours & Co. (Inc.), Grasselli Chemicals Department, Room N-2533L, Wilmington 98, Del.

**Double-action rug and upholstery shampoos—
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Generally regarded as the greatest organic chemist of his time, Emil Fischer was awarded the Nobel Prize in 1902 for his outstanding researches in the structures of the sugar and purine groups.

By 1902 Foremost's El Dorado Division had completed 10 years of outstanding service to American Industry as a supplier of coconut oil and its by-products... products of outstanding purity and uniformity.



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SPECIALIZED PRODUCTS. Iodine sanitizers and detergent-sanitizers are offered by leading manufacturers for treatment of milk, food and beverage utensils and equipment. Also available are iodine disinfectant-cleaners for hospitals, schools, institutions, food and beverage plants, and industrial applications.

EFFECTIVE. Iodine sanitizers are effective in low concentrations... economical, too. Their use can contribute to improved public health.

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Lawrason Acquires Cowan

S. F. Lawrason & Co., London, Canada, has acquired John Cowan Chemical Co., Ltd., Montreal, manufacturer of basic and converted chemicals for use in the soap and related specialties field, it was announced recently by Walter J. Evans, president and general manager of Lawrason. Cowan makes a similar line of materials, plus finished products including "Laraxo" powdered hand cleaner.

According to Mr. Evans, the Cowan concern will continue to operate under its corporate name. James W. Davidson, head of all Lawrason operations in Quebec and the Maritimes, will serve as general manager of Cowan, which was founded in 1877.

Ruskin New Arizona Pres.

J. H. Ruskin, general manager of the fine chemicals division of American Cyanamid Co., has been elected president and director of Arizona Chemical Co., New York. He succeeds Albert Scharwachter,

who was killed last February in an automobile accident in Florida. Mr.



J. H. Ruskin

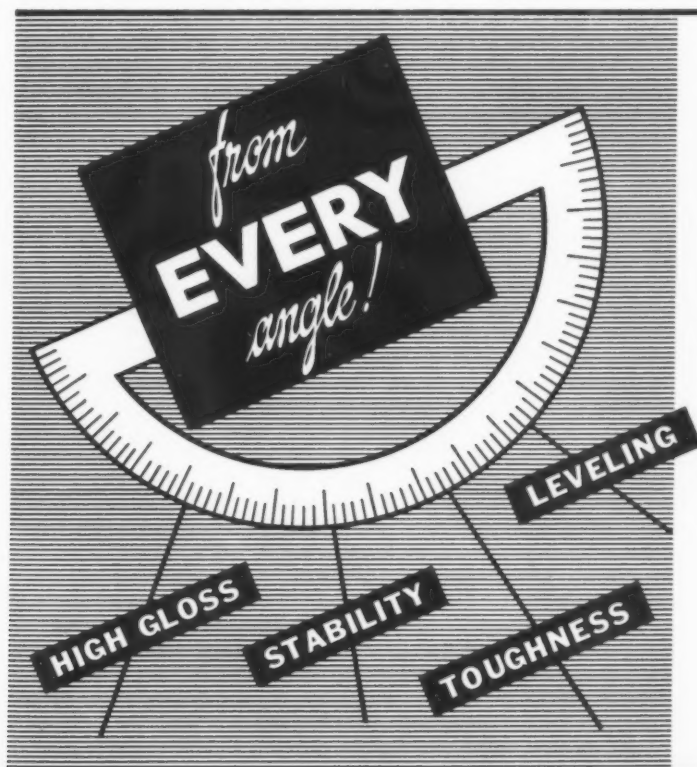
Ruskin joined Cyanamid's legal department in 1947 and two years later was named assistant secretary. He also had served as assistant general manager of Cyanamid's petrochemicals division. A producer of tall oil and tall-oil based products, Arizona is jointly owned by Cyanamid and International Paper Co., New York.

MGK Sales Higher

McLaughlin Gormley King Co., Minneapolis, recently reported that its chemical division sales for the first half of its fiscal year ended March 31 increased 67.7 per cent over the similar period of the previous fiscal year. Earnings figures are not yet available but are expected to show an increase, according to the company. MGK credits the sales rise to technological improvements within the firm, providing for the first time in commercial volume, pyrethrum for stain-free aerosol insecticides.

In New Col.-So. Post

J. E. Burrell has been appointed general manager of operations for Columbia-Southern Chemical Corp., Pittsburgh, it was announced recently by Joseph A. Neubauer, president. He succeeds Robert L. Hutchison, who died recently. Mr. Burrell has been with Columbia since 1941 and previously served as assistant to the vice-president of operations.



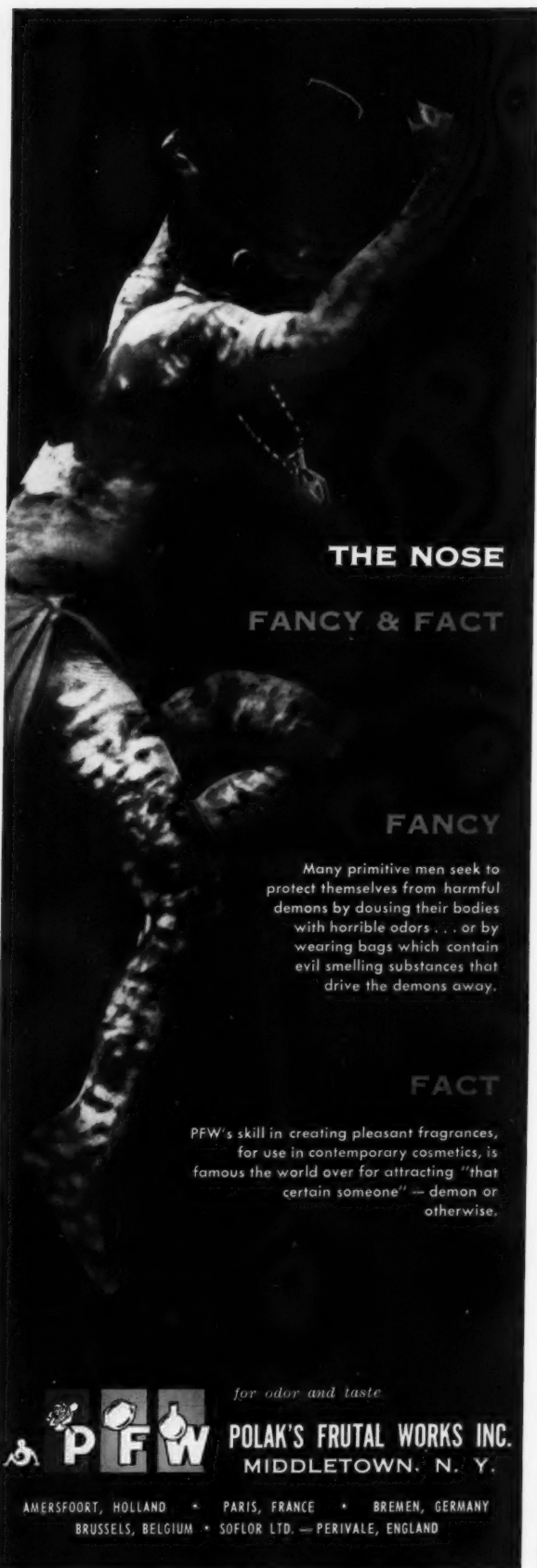
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Editor: EDWARD SAGARIN.

This encyclopedic treatment is the result of an industry-wide collaboration of 61 specialists. Many of these contributors are directors of research or research chemists from the leading cosmetic firms and, for specialized subjects, pharmaceutical manufacturers, medical schools, law firms and government agencies are also represented.

The greater part of the 51 chapters describe cosmetic preparation, such as cleansing creams, foundation make-up, lipstick, depilatories, shampoos, toothpaste, perfumes and many others, giving for each product:

physical forms in which the product is made • raw materials • formulations • methods of manufacture • dermatological or other special considerations • abundant literature references.

Other chapters take up such subjects as: history of the cosmetic industry, plant layout and equipment, quality control, physiology of the skin, the Federal Food Drug and Cosmetic Act, patents and trade marks.

1957. 1453 pages, 138 illus., 107 tables. \$25.00

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New Givaudan Rep.

Durkin Chemicals, Inc., Seattle, has been named sales representatives in Washington and Oregon for Givaudan-Delawanna, Inc., New York, it was announced recently by R. E. Horsey, vice-president in charge of sales. The new agents, which will handle Givaudan's complete line of perfume specialties, are located at 2603 Second Ave., Seattle 1.

P&G Man to Gov't Posts

James H. Taylor, manager of personnel administration for Procter & Gamble Co., Cincinnati, and Charles B. Stauffacher, vice-president of Continental Can Co., New York, recently were appointed by President Eisenhower to a board to help develop a top-level civil service program. The program is designed to select civilian career employees of high quality for non-political jobs paying between \$12,900 and \$16,000 a year.

Konen AOCS President

James C. Konen, vice-president in charge of research for Archer-Daniels-Midland Co., Minneapolis, was elected president of the American Oil Chemists' Society at the organization's 49th annual meeting held at the Peabody Hotel, Memphis, April 21-23. Vice-president of AOCS will be N. D. Embree, director of technical operations for Distillation Products Industries Division of Eastman Kodak Co., Rochester, N. Y. Continuing as secretary is R. W. Bates, development chemist of the food research department of Armour and Co., Chicago. A. F. Kapecki of Wurster and Sanger, Inc., Chicago will remain as treasurer. All four men will also serve on the AOCS governing board.

Elected as at-large members of the governing board were R. C. Stillman, supervisor of analytical standards and laboratory factory service, Procter & Gamble Co., Cincinnati; A. R. Baldwin, director of research, Cargill, Inc., Minneapolis; and A. E. MacGee, manager of the industrial division, Skelly

Oil Co., Kansas City, Missouri.

Serving with these men to complete the 11-man governing



James C. Konen

committee are four past presidents of AOCS: W. A. Peterson, Colgate-Palmolive Co., New York; H. C. Black, Swift and Co., Chicago; T. H. Hopper, Southern Regional Research Laboratory, New Orleans; and C. E. Morris, National Flaxseed Processors Association, Chicago.

Diversey Names Scharmack

W. K. Scharmack has been named director of technical development for Diversey Corp., Chicago, it was announced recently by Lewis Shere, president. He succeeds Donald V. Hannibal, who has been made director of purchases. Mr. Scharmack will be in charge of development of new industrial chemicals for the metal and food processing industries.

New Orkin Fla. Branch

Orkin Exterminating Co., Atlanta, Ga., recently announced the opening of a new branch office in Gainesville, Fla. The new office will operate under the supervision of Henry L. Boerner, who joined the company last December in Miami. Other branch managers recently appointed by Orkin include Robert P. Bender, Wilmington, N. C.; John W. Yates, Concord, N. C.; and David Boswell, Charleston, S. C. Thomas Crowley has been named supervisor of the Arizona-New Mexico district.

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at pH 10	54 mg
at pH 9	68 mg
at pH 8	74 mg



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Antifreeze Sales Lower

Approximately 106.8 million gallons of antifreeze were sold in 1957 according to results of the third annual antifreeze survey conducted recently by the Chemical Specialties Manufacturers Association. This compares with about 107.2 million gallons sold in 1956. The 1957 figures showed that about 82 percent of the sales were in the permanent-type, or primary ethylene glycol type, products.

As in previous years, the survey indicated a definite consumer preference for sealed packages of antifreeze preparations, as opposed to purchases from bulk containers. In permanent-type antifreezes 78 per cent of the sales were in gallon cans, 16 per cent in quart cans and six per cent in drums. For packaged methanol type of antifreeze, 47 per cent of sales were in gallon cans, 20 per cent in quart containers and 33 per cent in drums.

— ★ —

Davies-Young Suit Settled

A patent infringement suit in the U. S. District Court of San Francisco instituted by Davies-Young Soap Co., Dayton, against Patek Co., has been settled with the defendant paying an undisclosed consideration, according to Russell H. Young, president. Davies-Young had charged Patek with infringement of its Trusler Patent No. 2,729,576, covering permanent antistatic treatment of clothing after dry cleaning.

— ★ —

Surfactant Reprints

Reprints on the "Symposium on Ethylene Oxide Based Surface Active Agents," held at the 43rd midyear meeting of the Chemical Specialties Manufacturers Association last May in Chicago, are now available from CSMA, 50 East 41st St., New York 17. The reprint is bound in a heavy paper cover and its 16 pages include all the material presented at the symposium. Prices for the book are one dollar per copy for single copies; 50 cents per copy for 10 copies; and 25 cents per copy for 50 or more copies.

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Collinsworth Velsicol Head

E. T. Collinsworth, Jr., has been chosen president of Velsicol Chemical Corp., Chicago. The an-



E. T. Collinsworth

nouncement was made at the firm's recent annual meeting of stockholders. He succeeds Joseph Regenstein, Jr., who becomes chairman of the board. Mr. Collinsworth formerly

was executive vice-president. John F. Kirk, vice-president and director of sales had been appointed to the board of directors.



Joseph Regenstein, Jr.

Velsicol manufactures chlordane insecticide, plus industrial chemicals, including caustic soda, benzol, chlorine, resins and solvents.

CSMA Poison Laws

The seventh revision of the "Compilation of Economic Poisons Laws" recently was published by the Chemical Specialties Manufacturers Association, New York. The revision contains all laws and regulations enacted since the last revision and makes the compilation complete to January 1, 1958. The manual also contains a new index, a tabulation of the laws and a list of officials. Copies of the revision will be sent to CSMA members without charge. Cost of additional copies will be \$5.00 each to mem-

John F. Kirk



bers and \$10.00 to non-members. They may be obtained from CSMA, 50 East 41st St., New York 17.

— ★ —

New Diazinon Data Sheet

Availability of a catalog sheet describing its "Diazinon (insecticide) 25E" in a new formulation was announced recently by Geigy Agricultural Chemical Division of Geigy Chemical Corp., Ardsley, N. Y. The new formulation has a minimum flash point of 105° F. and is said to possess good emulsion stability in water. It may be used to control roaches, flies, silverfish, fleas, ants, chiggers and lawn chinch insects.

— ★ —

Carbide Names Clarke

De France Clarke has been appointed manager of the new projects department of Union Carbide Chemical Co., New York, it was announced recently. This newly-created department, which will be part of Carbide's marketing division, will be responsible for the development of new programs which are in the early stages of research and cannot as yet be assigned to any one particular marketing group.

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Consents to FTC Decree

Helene Curtis Industries, Chicago, has agreed to a Federal Trade Commission consent decree which prohibits Helene Curtis from representing its "Enden" shampoo as permanently curing dandruff. Willard Gidwitz, president of Helene Curtis said that the company always felt that its advertising indicated that "Enden" was to be used regularly as a shampoo to be effective. He added that the company plans to continue to advertise and market "Enden" in substantially the same manner as it has been doing.

The FTC complaint related to Helene Curtis' television advertising. The company took the position that viewers were adequately informed relative to the required regular use of the product for effective dandruff control.

— ★ —

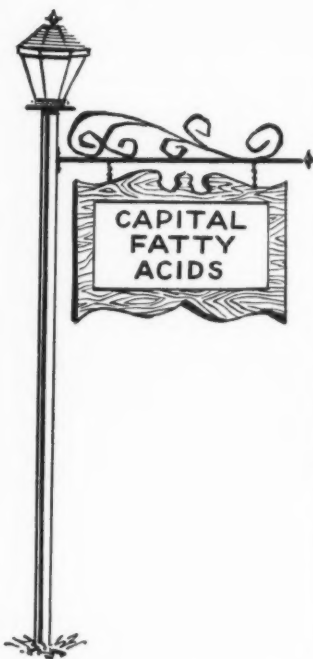
Sanitarians Hear Peet

Roy W. Peet, manager and secretary of the Association of American Soap & Glycerine Producers, Inc., was guest speaker at a meeting of the recently-formed Institute of Sanitation Management (ISM) held at the Hotel New Yorker, April 9. Mr. Peet offered the new organization the active support of AASGP in its efforts to promote better understanding of the problems of modern industrial and institutional sanitation.

— ★ —

New Franklin Booklet

Publication of a completely revised floor maintenance guide was announced recently by Franklin Research Co., 5134 Lancaster Ave., Philadelphia. The booklet includes the descriptions of new Franklin products such as its new heavy-duty floor machine and "Kemi-Kleen" sweeping tool and cloth. Separate sections are devoted to the application of Franklin's wax and non-wax floor finishes. Also included is a chart listing the average coverage per gallon of Franklin products per square feet. Copies may be obtained from the company.



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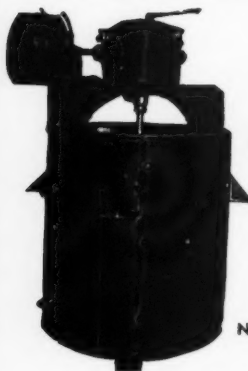
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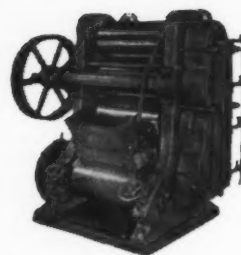


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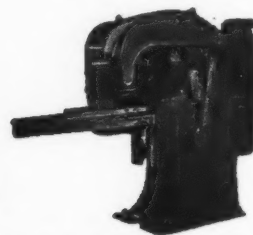


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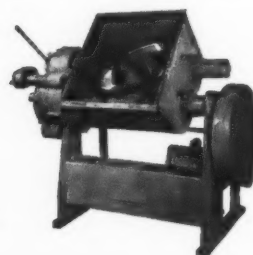
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(Reference Books see page 30)

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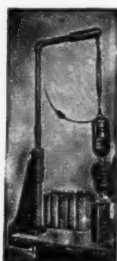
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New Consolidated Cleaner

Development of a new all-purpose, concentrated liquid cleaner was announced recently by



New all-purpose, concentrated liquid cleaner packed in two-ounce plastic package.

Consolidated Chemical Works, Chicago. Called "Shamp," the product is designed for cleaning floors and hard surfaces of wood, linoleum, asphalt, rubber, plastic, tile, terrazzo, and marble, painted walls and liquid soap dispensers. "Shamp" comes in a two-ounce plastic package.

— ★ —

Clorox Sales Methods Aired

The Federal Trade Commission inquiry into the merger of Procter & Gamble Co., Cincinnati, and Clorox Co., Oakland, Calif., continued last month in San Francisco with the FTC delving into the sales promotion practices of the Clorox concern. Neil Shaver, advertising manager of Clorox answered questions which were ap-

parently aimed at finding out what difference, if any, there was in Clorox advertising since its merger with P&G last Aug. 1.

The FTC has filed a complaint against Procter & Gamble alleging that the merger with the Oakland firm violated the Clayton Antitrust Act.

B. F. Trimpe, vice-president in charge of sales for Clorox, told the investigating body that while Clorox distributors sometimes conducted tie-in promotion sales, the company itself never offered its product tied in with a Procter & Gamble product.

"I see no purpose of a tie-in with P&G," Mr. Trimpe testified before Everett F. Haycraft, FTC examiner. "Procter & Gamble doesn't have the acceptance in most of our areas that we do," Mr. Trimpe said.

Mr. Haycraft then commented that "that may be the reason why Procter & Gamble wanted to acquire Clorox."

Mr. Trimpe answered by saying that he saw no need for sales tie-ins with P&G products because such sales promotion tie-ins were generally with house cleaning utensils, such as buckets and mops, and not with soaps or detergents such as are produced by Procter & Gamble.

The FTC is expected to rest its case sometime next month after hearings in several other cities, possibly New York, Chicago, St. Louis and Boston, an FTC spokesman said.

New All-Purpose Cleaner

National Chemical Laboratories, Philadelphia, has developed a new all-purpose cream cleanser



that is designed to remove tar, ink, grease, floor wax and oxidation from metals. Trade-named "Dab," the product is said not to scratch porcelain or any other surfaces and may be used to wash hands, according to the manufacturer.

"Dab" contains lanolin, and will rinse quickly and leaves a clean odor, National says. It is applied by dabbing on a surface and then wiping it off. The new cleaner is being sold through sanitary supply distributors under an exclusive franchise arrangement, with several areas still open throughout the nation.

The product comes in two-pound cans, 50-pound pails, and 300 and 550-pound drums. All drums are equipped with polyethylene liner inserts.



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Coming Meetings

American Oil Chemists Society, short course on soaps and syndets, Princeton Inn, Princeton, N. J., July 14-18; fall meeting, Sherman Hotel, Chicago, Oct. 20-22; 50th anniversary spring meeting, Roosevelt Hotel, New Orleans, April 20-22, 1959.

Association of American Soap & Glycerine Producers, 32nd annual convention, Waldorf-Astoria Hotel, New York, Jan. 20, 21 and 22, 1959.

Canadian Chemical Specialties Manufacturers, first annual meeting, Queen Elizabeth Hotel, Montreal, P.Q., Nov. 13-14.

Chemical Specialties Manufacturers Association, 44th midyear meeting, Netherland Hilton Hotel, Cincinnati, May 20-21; 45th annual meeting, Commodore Hotel, New York, Dec. 8-10.

Commercial Chemical Development Association, spring meeting, Niagara Hotel, Niagara Falls, N. Y., June 4-6.

Entomological Society of America, sixth annual meeting, Hotel Utah, Salt Lake City, Dec. 1-4.

Industrial and Building Sanitation Maintenance, third show and conference, Sheraton Philadelphia Hotel and Convention Hall, Philadelphia, Nov. 3-6, 1958.

Manufacturing Chemists' Association, annual meeting, Greenbrier Hotel, White Sulphur Springs, W. Va., June 12-14.

National Hotel Exposition, Coliseum, New York, Nov. 3-7.

National Packaging Exposition of American Management Association, Coliseum, New York, May 26-30, Packaging Conference, Hotel Statler, May 26-28.

National Pest Control Association, 25th annual convention, Hotel Statler, Washington, D. C., Oct. 20-23.

National Sanitary Supply Association, 2nd western trade show and conference, Fairmount Hotel, San Francisco, Oct. 19-21, 1958; 36th annual convention and trade show, Conrad Hilton Hotel, Chicago, April 12-15, 1959.

Premium Advertising Conference, Sheraton Astor Hotel, New York, Sept. 8-11.

Salesmen's Association of American Chemical Industry, golf outings, May 20, June 26, July 22, Aug. 19 and Sept. 18, Sales clinic, Roosevelt Hotel, New York, Oct. 20.

Society of Cosmetic Chemists, spring meeting, Hotel Commodore, New York, June 4.

Synthetic Organic Chemical Manufacturers Association, annual outing, Shawnee Inn, Shawnee, Pa., May 26-28.

Toilet Goods Association, 23rd annual convention, Poland Spring House, Poland, Me., June 25-29; scientific section, Waldorf Astoria Hotel, New York, June 5.

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Tale Ends

WHEN a bloke breaks his arm playing football, that's one thing. But when a fellow breaks his leg in two places playing paddle tennis, that's news. And it happened to Harold Schmidt, eastern sales representative for Federal Varnish Division (Enterprise Paint) of Chicago. Harold is now on crutches recovering from the accident. While confined to his home, Harold says the wax business was really great. In fact, he's a bit afraid that his boss, Glenn Doerr will want him to break the other leg in the interest of booming sales.

A new eyeglass cleaner in aerosol form is being marketed by Lenz-Spray, New York. It's one of these small pocket-size metal aerosols containing a silicone formulation and said to be good for 200 measured squirts, enough to keep your glasses clean for a year. It's one of those fancy blue and gold deals. Retail for one buck.

Continental Can Co.'s booklet on aerosols, issued last summer, has turned out to be a "best seller." Since it was announced, according to Bernard Zwirn, director of public relations for Continental, the company has been "deluged with requests for the booklet and our supply is now exhausted." Consequently, Bernie has asked us to advise our readers to be patient until a new printing is made. However, this may be some time, what with all the new developments in aerosols. Incidentally, the booklet was a real good job and the new version should be worth waiting for.

In South Carolina, the sale of "canned heat" is forbidden "to any person using same for beverage purposes." How the dealer is to know prior to sale that the buyer intends to use the stuff as a beverage, the law does not state. Heretofore, it was apparently easy just to walk in a hardware store and buy a can of ready-made cocktails. Those free and easy days are now gone. The law says "nix."

Simoniz Co. of Chicago has just fallen heir to a new patent, via assignment, for a new type shampoo, an anti-snarling hair cleaner containing liquid linear polysiloxane. The amount of detergent present must be at least twice the amount of polysiloxane. Probably another example of what diversification can do,—from floor waxes and floor cleaners to skull cleaners. Wonder if you could wash a car with this new stuff?

Shaving cream containing milk is now being marketed by an Eastern manufacturer. The maker says that a dash of powdered milk in the shave soap gives the same soothing action as an old-fashioned milk bath. Which of course is so much malarkey, but some slobos may believe it. Some day we're going to put

out a "hot mustard toilet soap" containing "pure mustard" and designed to fill you full of pep after one bath with the stuff. That'll fix 'em!

Li Teh-chuan, Communist China Minister of Public Health recently spearheaded a special hygiene campaign aimed at wiping out rodents, sparrows, flies and mosquitoes. So far, says he, over 40 million rodents and 25 million grain eating sparrows have been killed off, and thousands of factories, mines, schools and other places have been completely freed from insects. What they used to do the job is not mentioned.

A reader comments that the picture of R. R. Deupree, chairman of Procter & Gamble, which ran on page 194 of the March issue of SOAP, must date back almost to the year he received his 10-year pin at P&G. Admittedly the cut we used and since have destroyed was an old timer, but not quite as antique as our reader-writer infers. After

all that would take us back over 40 years! Henceforth we shall use a cut made from a spanking new photograph of R.R.

This publication has been referred to by a lot of strange names over the years, but the latest one takes the cake. From an outfit we choose not to identify we received a letter last month addressed to "Slap and Chemical Specialties." Almost as good as the one sent to "Soap & Cemetery Chemicals."

Speaking of names, P&G's new technical center is called "Winton Hill," not "Winston Hill" as we said in a caption with a photograph in the April issue. Probably we succumbed to the influence of a particularly effective TV cigarette commercial.

Meanwhile, back at the ranch Shell Chemical Agricultural News ("SCAN") for April announces with pride a new zinnia, "Pride of Dieldrin," by Breck's seed company of Boston. With each copy of the "SCAN" newsletter was sent one pack of flower seeds named after Shell's famous insecticide. What if this new zinnia is insect resistant?

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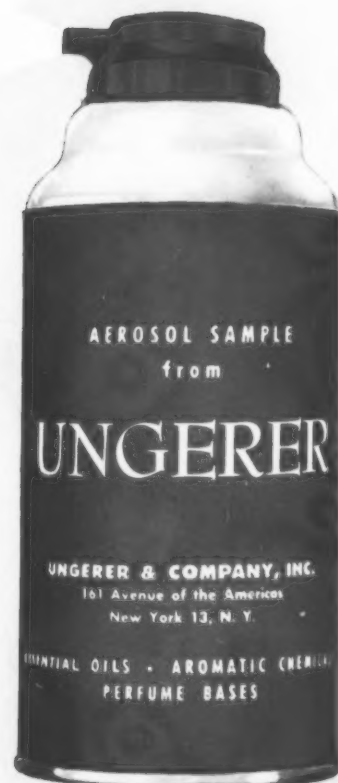
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